HCD-GRX7/GRX7J/R700/RX77/RX77S

SERVICE MANUAL

Canadian Model
HCD-RX77

AEP Model
HCD-R700/RX77/RX77S

UK Model
HCD-R700/RX77S

E Model
HCD-GRX7/GRX7J

Australian Model
HCD-GRX7

Tourist Model
HCD-GRX7J

HCD-GRX7/GRX7J/R700/RX77/RX77S are the Amplifier, CD player, Tape Deck and Tuner section in MHC-GRX7/GRX7J/R700/RX77/RX77S.

Photo: HCD-RX77

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CD Section	Model Name Using Similar Mechanism	HCD-H991AV
	CD Mechanism Type	CDM38L-5BD29AL/ CDM38LH-5BD29AL
	Base Unit Type	BU-5BD29AL
	Optical Pick-up Type	KSS-213D/Q-NP
TAPE DECK Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM-230AWR1/ 230PWR1

SPECIFICATIONS

Amplifier section

Canadian model:
Continuous RMS power output (reference)
100 + 100 watts
(8 ohms at 1 kHz, 10% THD)
Total harmonic distortion less than 0.07%
(8 ohms at 1 kHz, 55 W)

European and Russian models:
DIN power output (rated) 60 + 60 watts
(6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
80 + 80 watts
(6 ohms at 1 kHz, 10% THD)
Music power output (reference)
135 + 135 watts
(6 ohms at 1 kHz, 10% THD)

Other models:
The following measured at AC 110, 220 V 50/60 Hz
DIN power output (rated) 85 + 85watts
(8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
110 + 110 watts
(8 ohms at 1 kHz, 10% THD)
The following measured at AC 120, 240 V 50/60 Hz
DIN power output (rated) 105 + 105 watts
(8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
130 + 130 watts
(8 ohms at 1 kHz, 10% THD)
Peak music power output (reference)
1500 watts

– Continued on next page –

MINI Hi-Fi COMPONENT SYSTEM

MICROFILM

SONY®

Specifications (continued)

Inputs	
MD/VIDEO IN: (phono jacks)	voltage 450 mV/250mV, impedance 47 kilohms
MIX MIC: (phone jack)	sensitivity 1 mV, impedance 10 kilohms

Outputs	
MD/VIDEO OUT: (phono jacks)	voltage 250 mV, impedance 1 kilohms
PHONES: (stereo phone jack)	accepts headphones of 8 ohms or more
SPEAKER:	
European and Russian models:	accepts impedance of 6 to 16 ohms
Other models:	accepts impedance of 8 to 16 ohms
SURROUND SPEAKER (Canadian model):	accepts impedance of 16 ohms
SUPER WOOFER (GRX7/GRX7J/RX77: Canadian models):	Voltage 1 V, impedance 1 kilohm

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780nm) Emission duration: continuous
Laser output	Max. 44.6 µW* *This output is the value measured at distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response	2 Hz - 20 kHz (±0.5 dB)
Wavelength	780 -790 nm
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
CD OPTICAL DIGITAL OUT (Square optical connector jack, rear panel)	
Wavelength	600 nm
Output Level	-18 dBm

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	40 - 13,000 Hz (±3 dB), using Sony TYPE I cassette 40 - 14,000 Hz (±3 dB), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 - 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

UKV tuner section (4 band models only)

Tuning range	65.0 - 74.0 MHz Stereo Plus

AM tuner section

Tuning range	
2 Band type:	
Canadian model:	530 - 1,710 kHz (with the interval set at 10 kHz) 531 - 1,710 kHz (with the interval set at 9 kHz)
Other model:	531 - 1,602 kHz (with the interval set at 9 kHz) 530 - 1,710 kHz (with the interval set at 10 kHz)
3 Band/4 Band type:	
European and Russian models:	
MW:	531 - 1,602 kHz (with the interval set at 9 kHz)
LW:	153 - 279 kHz (with the interval set at 3 kHz)
Middle Eastern models:	
MW:	531 - 1,602 kHz (with the interval set at 9 kHz)
SW:	5.95 - 17.90 MHz (with the interval set at 5 kHz)
Other models:	
MW:	531 - 1,602 kHz (with the interval set at 9 kHz) 530 - 1,710 kHz (with the interval set at 10 kHz)
SW:	5.95 - 17.90 MHz (with the interval set at 5 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
Canadian model:	120 V AC, 60 Hz
European and Russian models:	230 V AC, 50/60 Hz
Mexican model:	120 V AC, 50/60 Hz
Australian and Israel models:	220 - 240 V AC, 50/60 Hz
Thai model:	220 - 240 V AC, 50/60 Hz
Other models:	110 - 120 V or 220 - 240 V AC, 50/60 Hz

Power consumption	
Canadian model:	195 watts
European and Russian models:	140 watts
Other models:	250 watts

Dimensions (w/h/d)	Approx. 280 × 335 × 380 mm (11$^{1}/_{8}$ × 13$^{1}/_{8}$ × 15 in.)

Mass	
Canadian model:	Approx. 9.5 kg (20 lbs. 15 oz.)
European and Russian models:	Approx. 9.1 kg (20 lbs. 1 oz.)
Other models:	Approx. 10.2 kg (22 lbs. 8 oz.)
Supplied accessories:	AM loop antenna (1) Remote RM-SR5 (1) Batteries (2) FM lead antenna (1) Speaker cords (2) Front speaker pads (8)

Design and specifications are subject to change without notice.

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on chip component replacement

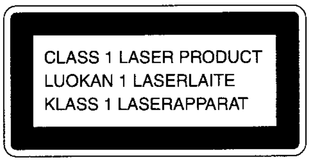
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

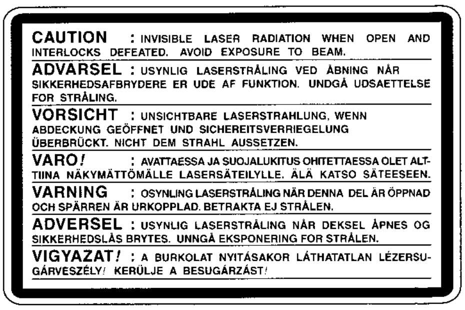
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.



CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.

VORSICHT : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.

VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

SAFETY-RELATED COMPONENT WARNING!!

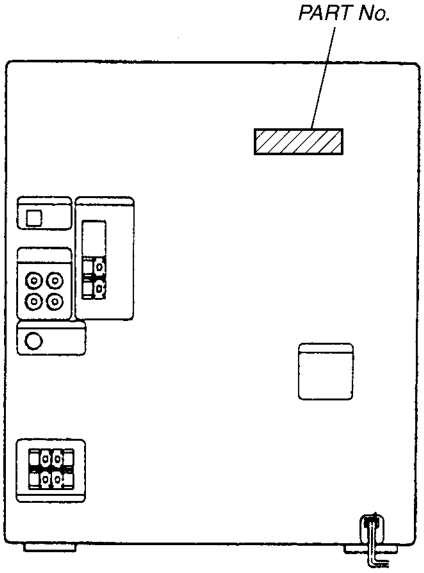
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION

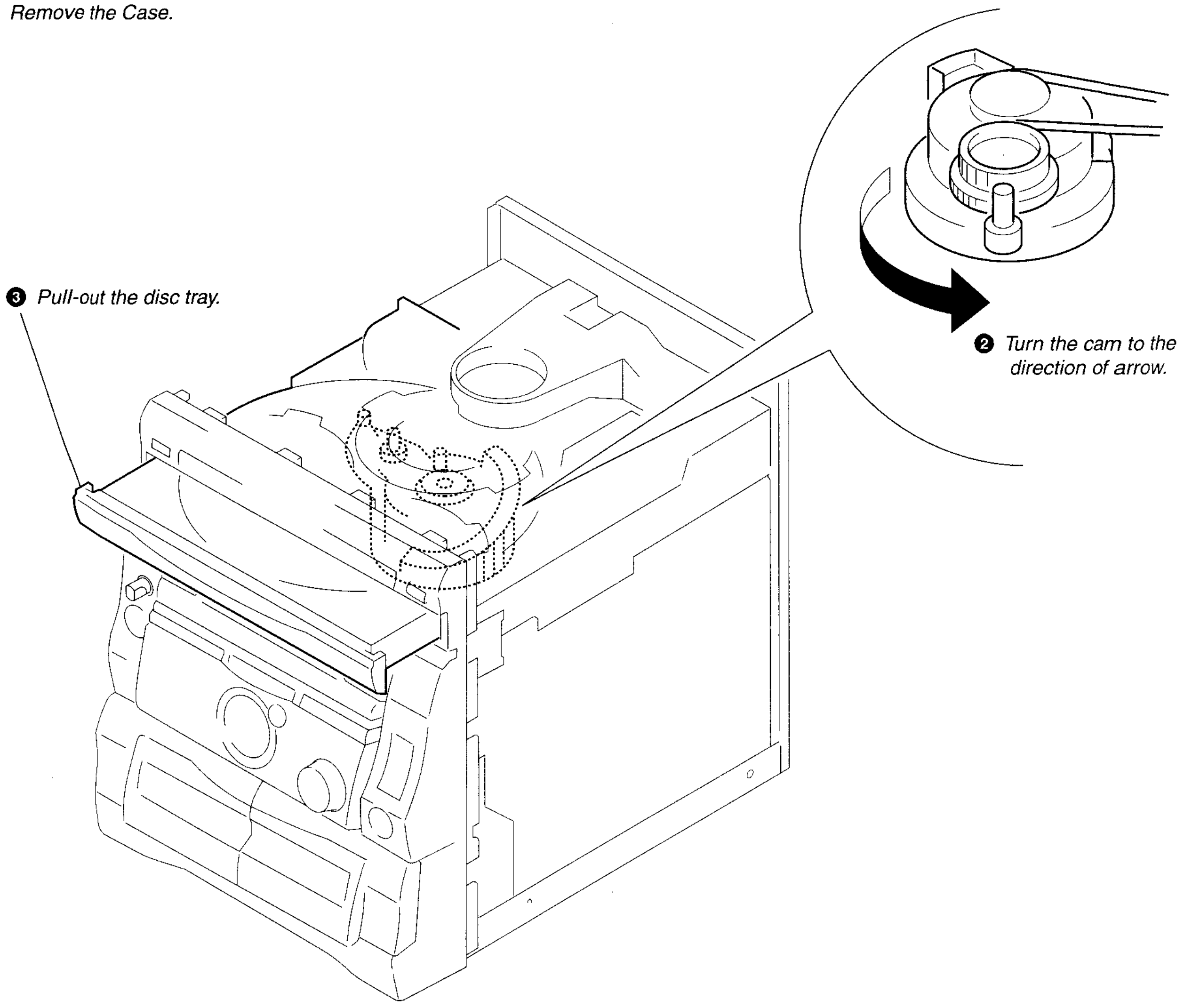
– Back Panel –



MODEL	PART No.
Canadian model	4-996-843-0☐
Israel and Thai models	4-996-843-6☐
E model	4-996-844-0☐
Malaysia, Singapore and South African models	4-996-844-1☐
GRX7: Saudi Arabia and Taiwan models	4-996-844-2☐
Hong Kong model	4-996-844-3☐
Australian model	4-996-844-4☐
Mexican model	4-996-844-5☐
Indonesian model	4-996-844-7☐
GRX7J	4-996-844-8☐
RX77S: UK model	4-996-845-0☐
RX77S: East European and CIS model	4-996-845-1☐
R700	4-996-845-2☐
RX77: AEP and German model	4-996-845-3☐
RX77: East European model	4-996-845-4☐

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF.

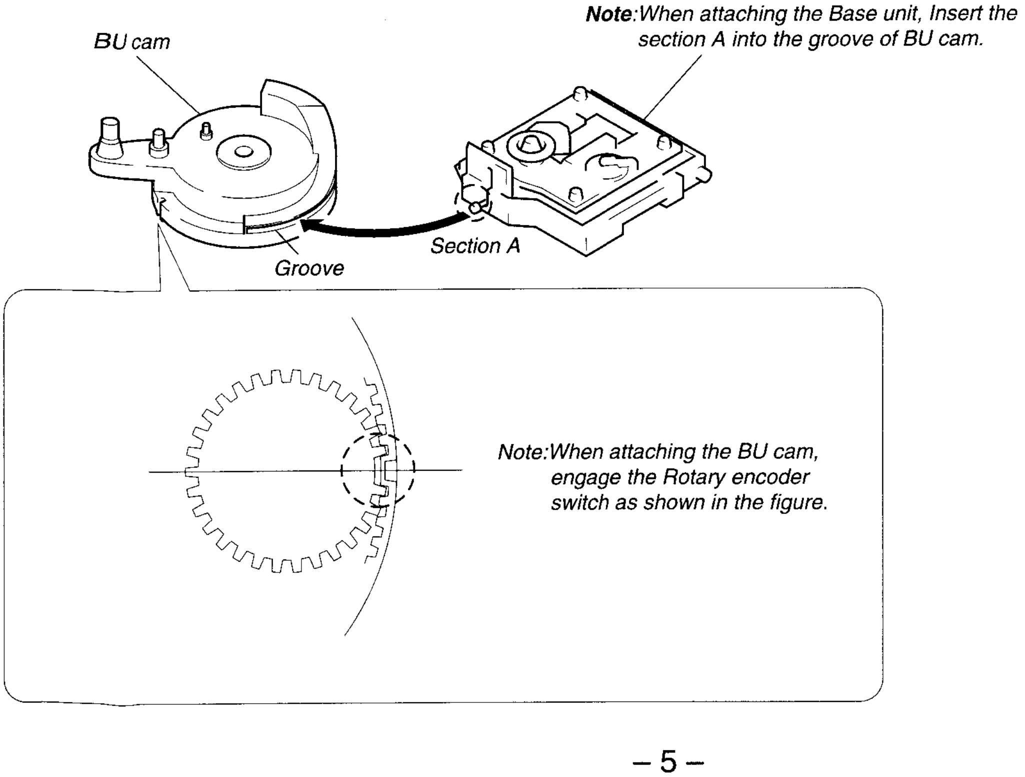
❶ *Remove the Case.*



❸ *Pull-out the disc tray.*

❷ *Turn the cam to the direction of arrow.*

NOTE FOR INSTALLATION (ROTARY ENCODER)

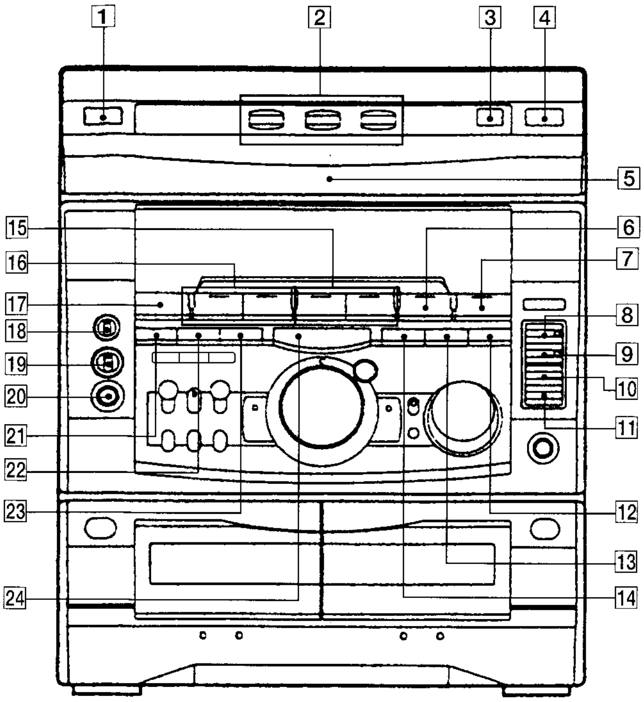


Note*:When attaching the Base unit, Insert the section A into the groove of BU cam.*

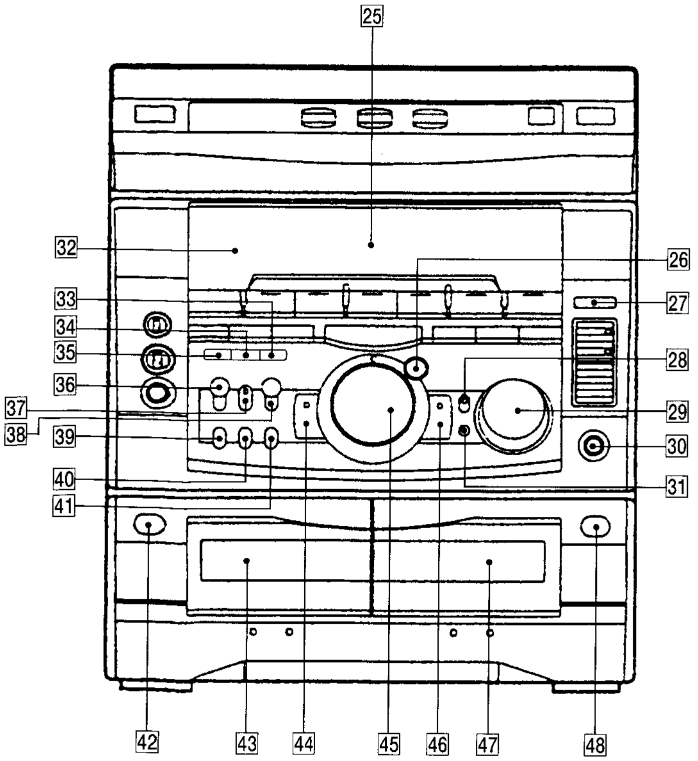
Note:When attaching the BU cam, engage the Rotary encoder switch as shown in the figure.

SECTION 2
GENERAL

LOCATION OF CONTROLS



1 I/⏻ (Power) button
2 DISC 1 to 3 buttons and indicators
3 DISC SKIP/EX-CHANGE button
4 ⏏ (CD) button
5 CD disc tray
6 CD ▶II button and indicator
7 TUNER, BAND button
8 ● REC button and indicator
9 II PAUSE button and indicator
10 HI-DUB button
11 CD SYNC button
12 EFFECT button and indicator (GRX7/GRX7J/RX77: Canadian models) FILE SELECT button (AEP, UK, German, East European, and CIS models)
13 SURROUND button
14 KARAOKE PON/MPX button
15 DECK B ◀ and ▶ buttons and indicators
16 DECK A ◀ and ▶ buttons and indicators
17 FUNCTION button
18 ECHO LEVEL knob (Saudi Arabia model)
19 MIC LEVEL knob
20 MIX MIC jac
21 DISPLAY/DEMO button
22 CLOCK/TIMER SET button
23 TIMER SELECT button
24 ■ button



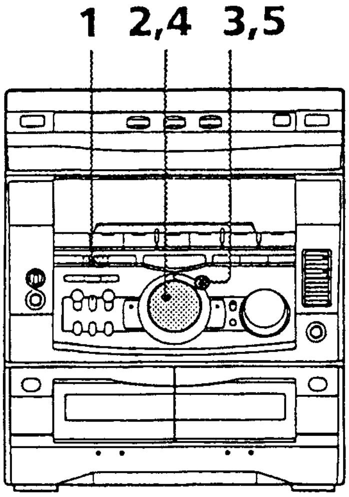
25 Fluorescent indicator tube
26 ENTER/NEXT button and indicator
27 PTY button (AEP, UK, and German models)
28 GROOVE button and indicator
29 VOLUME konb
30 PHONES jack
31 DBFB button
32 Remote sensor
33 P FILE MEMORY button (GRX7/GRX7J/RX77: Canadian models)
34 GEQ CONTROL button (GRX7/GRX7J/RX77: Canadian models)
35 FILE SELECT button (GRX7/GRX7 J/RX77: Canadian models)
36 LOOP button
37 NON-STOP button and indicator
38 FLASH button
39 EDIT, DIRECTION button
40 PLAY MODE, DOLBY NR button
41 REPEAT button
42 ⏏ button (deck A)
43 Tape deck A
44 –, ◀◀ button and indicator
45 JOG dial
46 +, ▶▶ button and indicator
47 Tape deck B
48 ⏏ button (deck B)

Step 2: Setting the time

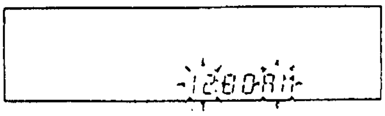
You must set the time before using the timer functions.

The clock is on a 24-hour system for the European model, and a 12-hour system for other models.

The 12-hour system model is used for illustration purposes.

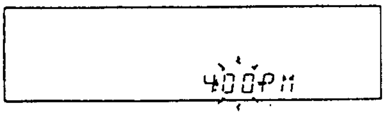


1 Press CLOCK/TIMER SET.
The hour indication flashes.



2 Turn the jog dial to set the hour.

3 Press ENTER/NEXT.
The minute indication flashes.



4 Turn the jog dial to set the minute.

5 Press ENTER/NEXT.
The clock starts working.

Tips

- If you've made a mistake, start over from step 1.
- Setting the time deactivates the demo mode.
  If you want to display the demo mode, press DISPLAY/DEMO when the power is off.

Note

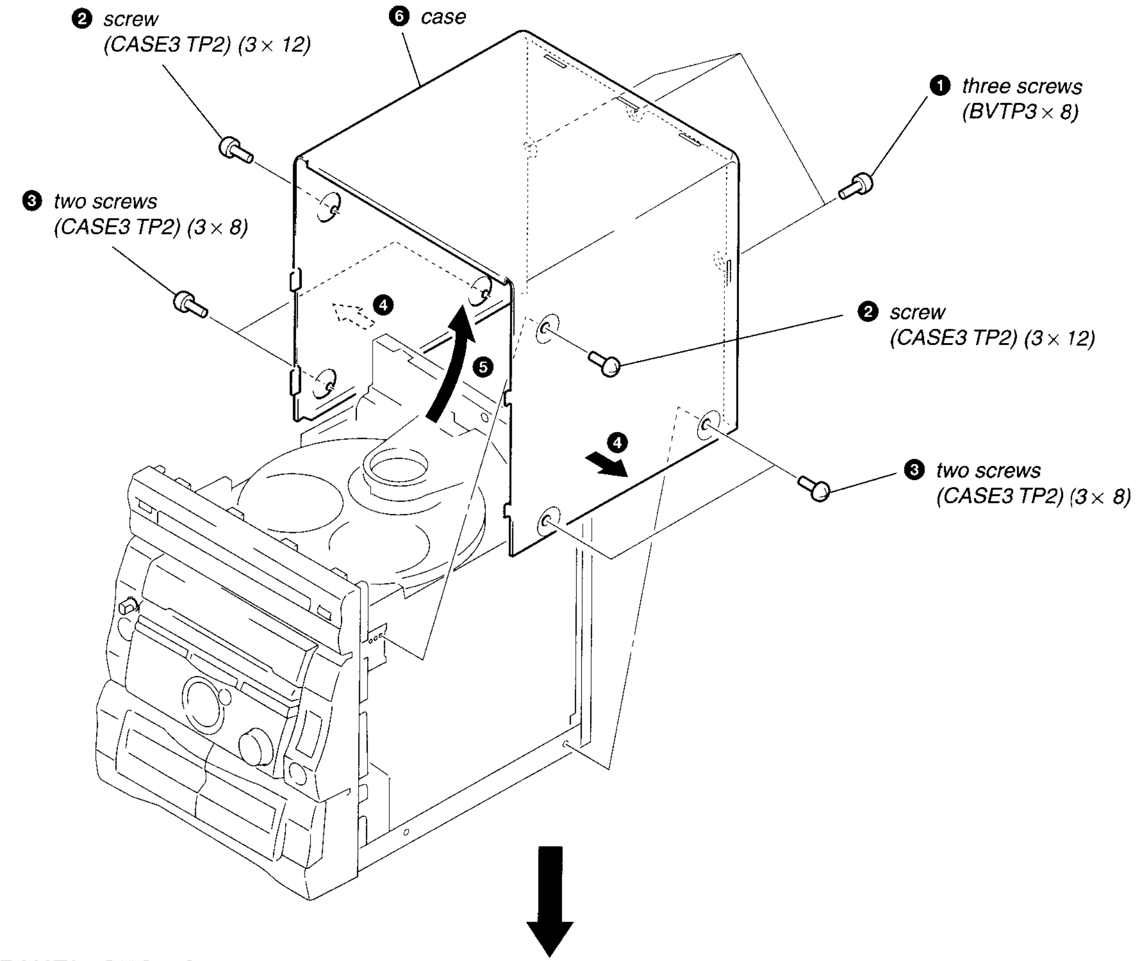
The previous explanation shows you how to set the time while the power is off. To change the time while the power is on, do the following:

1 Press CLOCK/TIMER SET.
2 Turn the jog dial to select SET CLOCK.
3 Press ENTER/NEXT.
4 Perform steps 2 through 5 above.

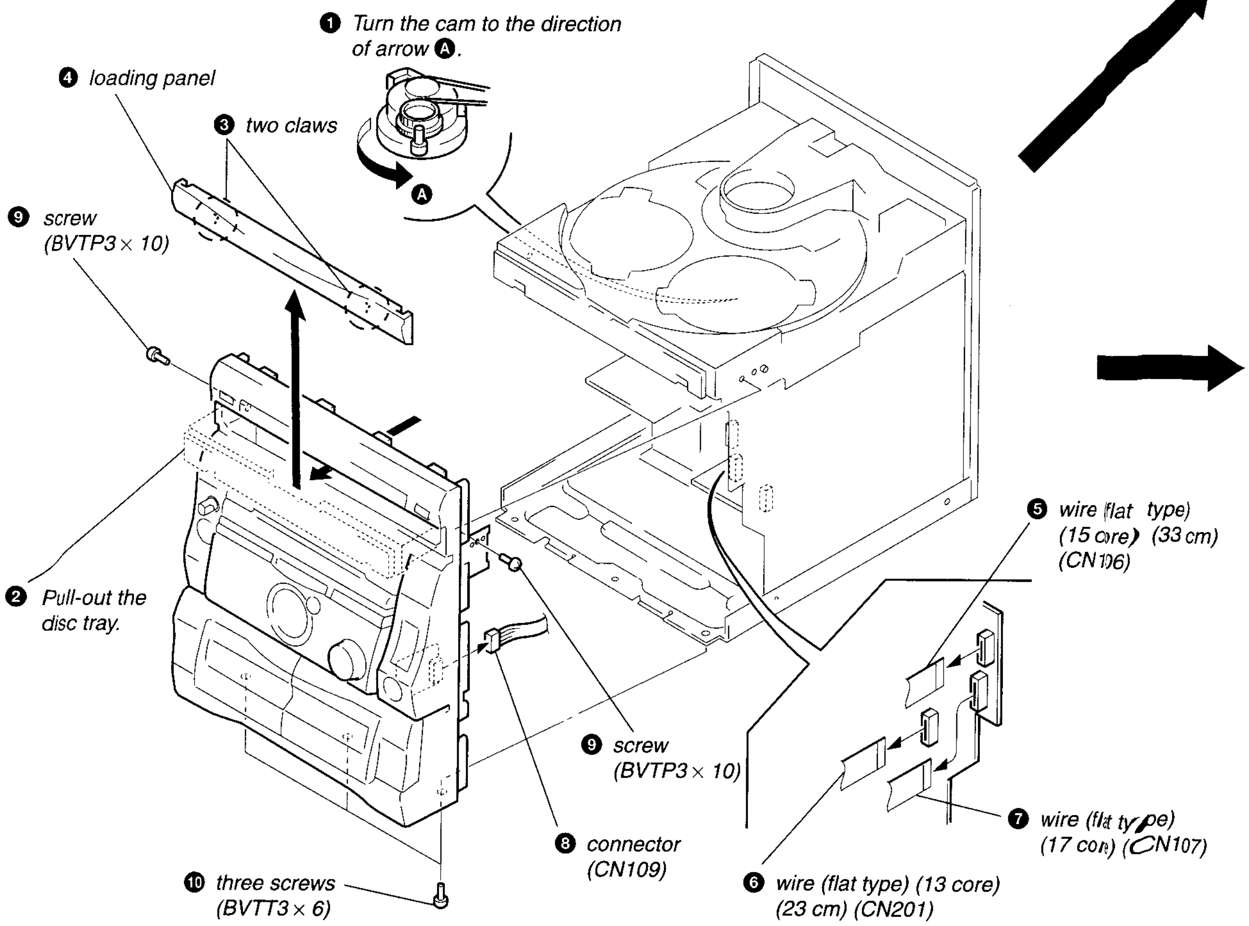
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

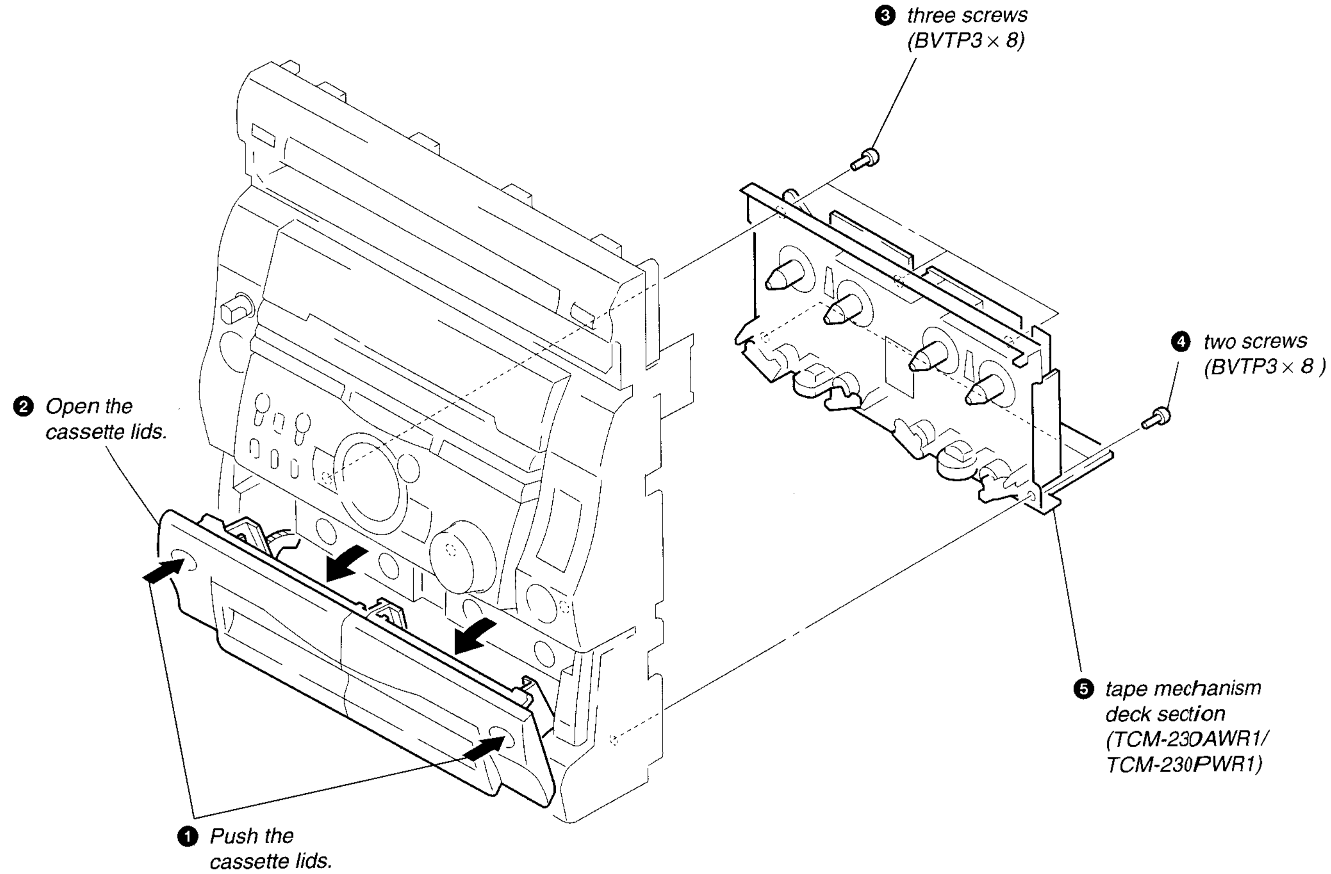
CASE


❷ screw
(CASE3 TP2) (3 × 12)
❻ case
❶ three screws
(BVTP3 × 8)
❸ two screws
(CASE3 TP2) (3 × 8)
❹
❺
❷ screw
(CASE3 TP2) (3 × 12)
❹
❸ two screws
(CASE3 TP2) (3 × 8)

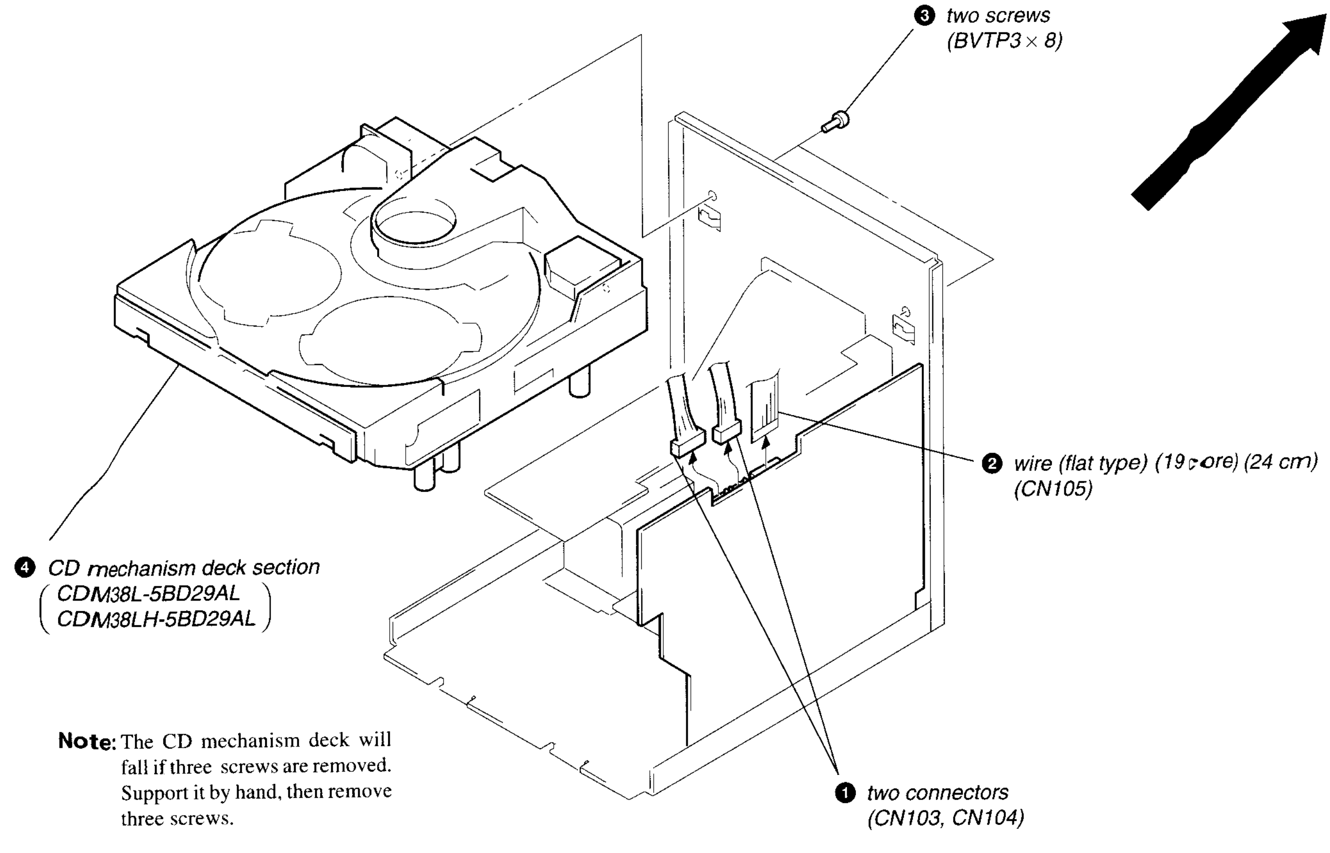
FRONT PANEL SECTION


❶ Turn the cam to the direction
of arrow Ⓐ.
Ⓐ
❹ loading panel
❸ two claws
❾ screw
(BVTP3 × 10)
❷ Pull-out the
disc tray.
❺ wire (flat type)
(15 core) (33 cm)
(CN106)
❾ screw
(BVTP3 × 10)
❽ connector
(CN109)
❼ wire (flat type)
(17 core) (CN107)
❻ wire (flat type) (13 core)
(23 cm) (CN201)
❿ three screws
(BVTT3 × 6)

TAPE MECHANISM DECK SECTION (TCM-230AWR1/TCM-230PWR1)


❸ three screws
(BVTP3 × 8)
❹ two screws
(BVTP3 × 8)
❷ Open the
cassette lids.
❺ tape mechanism
deck section
(TCM-230AWR1/
TCM-230PWR1)
❶ Push the
cassette lids.

CD MECHANISM DECK SECTION (CDM38L-5BD29AL/CDM38LH-5BD29AL)

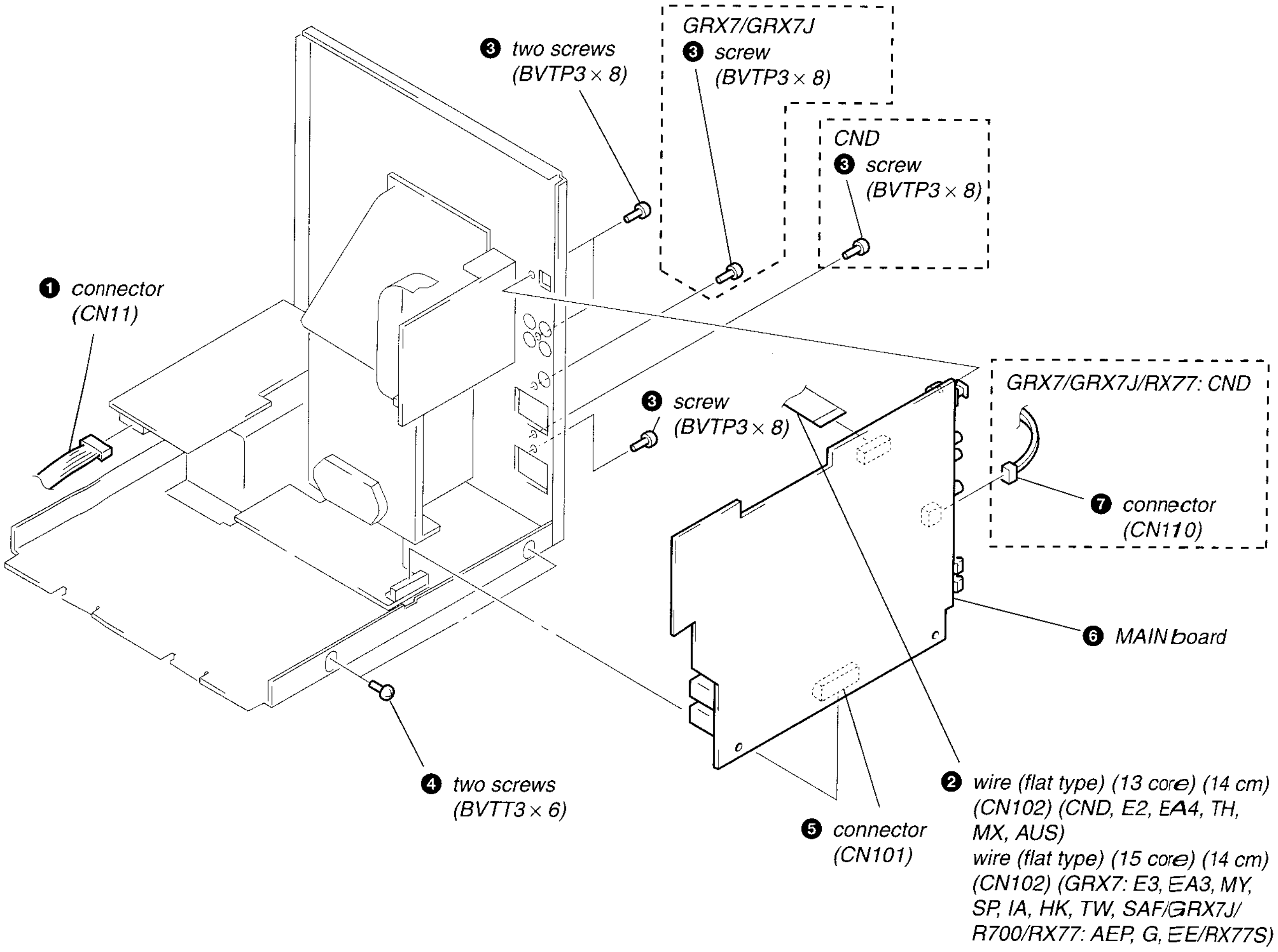

❸ two screws
(BVTP3 × 8)
❷ wire (flat type) (19 core) (24 cm)
(CN105)
❹ CD mechanism deck section
(CDM38L-5BD29AL)
(CDM38LH-5BD29AL)
❶ two connectors
(CN103, CN104)

Note: The CD mechanism deck will fall if three screws are removed. Support it by hand, then remove three screws.

MAIN BOARD

Abbreviation

AUS : Australian
CND: Canadian
E2 : 120 V AC Area in E model
E3 : 240 V AC Area in E model
EA3 : Saudi Arabia
EA4 : Israel
EE : East European
G : German
HK : Hong Kong
IA : Indonesian
MX : Mexican
MY : Malaysia
SAF : South African
SP : Singapore
TH : Thai
TW : Taiwan


❸ two screws (BVTP3 × 8)
GRX7/GRX7J
❸ screw (BVTP3 × 8)
CND
❸ screw (BVTP3 × 8)
❶ connector (CN11)
❸ screw (BVTP3 × 8)
GRX7/GRX7J/RX77: CND
❼ connector (CN110)
❻ MAIN board
❹ two screws (BVTT3 × 6)
❺ connector (CN101)
❷ wire (flat type) (13 core) (14 cm) (CN102) (CND, E2, EA4, TH, MX, AUS)
wire (flat type) (15 core) (14 cm) (CN102) (GRX7: E3, EA3, MY, SP, IA, HK, TW, SAF/GRX7J/R700/RX77: AEP, G, EE/RX77S)

SECTION 4
TEST MODE

[MC Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons ■, ENTER/NEXT, and I/⏻ simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Delivery Mode]

- This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Press LOOP button and I/⏻ button simultaneously.
3. A message "LOCK" is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[MC Hot Reset]

- This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons ■, ENTER/NEXT, and DISC 1 simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[Sled Servo Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function "CD".
3. Press three buttons ■, ENTER/NEXT, and ⏏ simultaneously.
4. The Sled Servo mode is selected, if "CD" is blanking on the fluorescent indicator tube.
5. With the CD in stop status, press ▶▶ + button to move the pickup to outside track, or – ◀◀ button to inside track.
6. To exit from this mode, perform as follows:
   1) Move the pickup to the most inside track.
   2) Press three buttons in the same manner as step 2.

Note:
- Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[Change-over of AM Tuner Step between 9 kHz and 10 kHz]

- A step of AM channels can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function "TUNER", and press TUNER/BAND button to select the BAND "AM".
3. Press I/⏻ button to turn the set OFF.
4. Press ENTER/NEXT and I/⏻ buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9 k STEP" or "AM 10 k STEP", and thus the channel step is changed over.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons ■, ENTER/NEXT, and DISC 2 simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
   Press DISC 2 button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays "K 1 J0 V0". Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account.
   "J" value increases like 1, 2, 3 ... if rotating JOG knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
   "V" value increases like 1, 2, 3 ... if rotating VOLUME knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
  The aging operation stops and display status.
- If no error occurs:
  The aging operation continues repeatedly.

1. Operating Method of Aging Mode

1) Set disc in DISC1 tray.
2) Load the tapes recording use into the decks A and B respectively.
3) Press three buttons ■, ENTER/NEXT, and DISC SKIP/EX-CHANGE simultaneously.
4) The aging mode is activated, if a CD roulette mark on the fluorescent indicator tube is blinking.
5) To exit from the aging mode, press I/⏻ button to turn the set OFF.

2. Operation Sequence

- During the aging mode in the following sequence to below.
- Starting the CD section aging for function set "CD", starting the TAPE section (deck A) aging for function set "TAPE A" or "TAPE B". (Set another function is no work.)

CD (disc1) (12 minutes) → Deck A
↑ ↓ (About 13 minutes 20 seconds maximum)
└── Deck B

3. Aging mode in CD section

1) Display state

- No error occurs

display

[✱][✱] 1 - [@][@]

Note:

[✱][✱] : a letter "CD" and the remainder time (minute) alternately. (remainder time start from 12 minute)

[@][@] : track number in access.

- Error occurred

NO.	Display	Main factor
1	NO DISC ERR	Not set disc in DISC1
2	FOCUS1 ERR	Focus does not work
3	FOCUS2 ERR	Focus does not work after the disc rotate as usual
4	GFS ERR	GFS error
5	FBIAS ERR	Error in to the focus bias adjustment
6	SENSOR ERR	Disc sensor sens DISC1 is no disc
7	TABLE ERR	CD tray lotate does not work
8	TRAY ERR	Tray (include BD) move does not work

2) Operation during aging Mode

In the aging mode, the program is executed in the following sequence.

(1) The disc tray turns to select a disc1.
(2) A disc is chucked.
(3) TOC of disc is read.
(4) The pickup accesses to the track 1, and playing 2 seconds.
(5) The pickup accesses to the last track, and playing 2 seconds.
(6) Steps 1 through 5 are repeated about 12 minutes.
(7) Change to deck section aging.

4. Aging mode in Tape Deck section

1) Display state

- No error occurs
  Display action now
- Error occurred
  Display action last time

NO.	Display action	Action contents	Final timing
1	TAPE A AG-1	Rewind the TAPE A	The top of tape
2	TAPE A AG-2	FWD play the TAPE A	3 minutes playing
3	TAPE A AG-3	F.F. the TAPE A	First either 20 minutes or the end of tape
4	TAPE A AG-4	REV play the TAPE A	3 minutes playing
5	TAPE A AG-5	Rewind the TAPE A	The top of tape
6	TAPE B AG-1	Rewind the TAPE B	The top of tape
7	TAPE B AG-2	FWD play the TAPE B	3 minutes playing
8	TAPE B AG-3	F.F. the TAPE B	First either 20 minutes or the end of tape
9	TAPE B AG-4	REV play the TAPE B	3 minutes playing
10	TAPE B AG-5	Rewind the TAPE B	The top of tape

2) Operation during Aging Mode

In the aging mode, the program is executed in the following sequence.

(1) Rewind is executed up to the top of tape.
(2) A tape on FWD side is played for 3 minutes.
(3) FF is executed up to either made for 20 minutes or the end of tape.
(4) A tape is reversed, and the tape on REV side is played for 3 minutes.
(5) Rewind is executed up to the top of tape.
(6) Steps 1 through 5 are executed for the other deck.
(7) Change to CD section aging.

SECTION 5
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
    - record/playback heads
    - erase head
    - capstan
    - pinch rollers
    - rubber belts
    - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	2 to 6 g • cm (0.03 – 0.08 oz • inch)
REV	CQ-102RC	31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	2 to 6 g • cm (0.03 – 0.08 oz • inch)
FF/REW	CQ-201B	71 to 143 g • cm (0.99 – 1.99 oz • inch)
FWD tension	CQ-403A	100 g or more (3.53 oz or more)
REV tension	CQ-403R	100 g or more (3.53 oz or more)

SECTION 6
ELECTRICAL ADJUSTMENTS

DECK SECTION 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

- Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

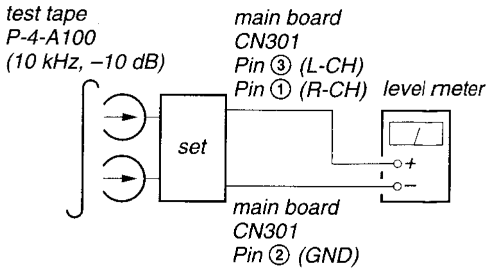
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

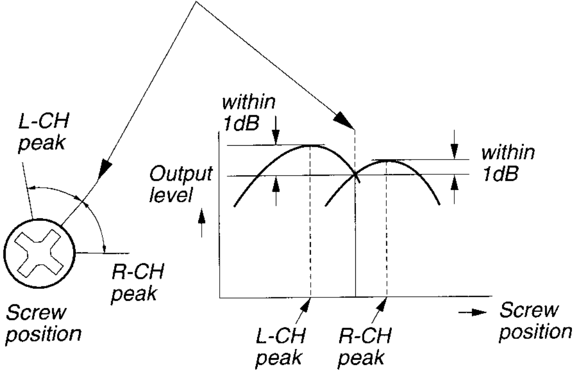
Note: Perform this adjustments for both decks

Procedure:

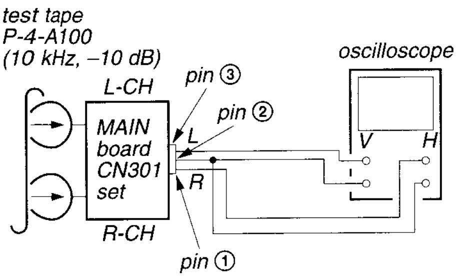
1. Mode: Playback

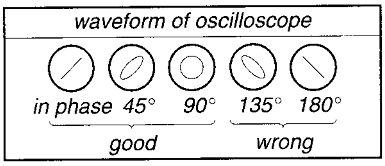


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.


L-CH peak
within 1dB
within 1dB
Output level
R-CH peak
Screw position
L-CH peak
R-CH peak
Screw position

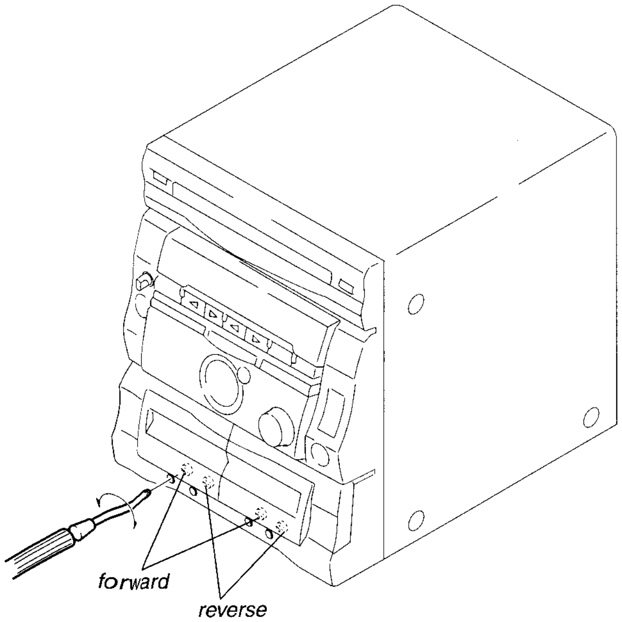
3. Mode: Playback


test tape
P-4-A100
(10 kHz, -10 dB)
L-CH
pin ③
pin ②
MAIN board CN301
set
L
R
R-CH
pin ①
oscilloscope
V
H


waveform of oscilloscope
in phase
45°
90°
135°
180°
good
wrong

4. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).


forward
reverse

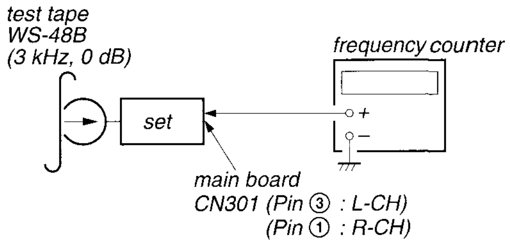
Tape Speed Adjustment DECK B

Note: Start the Tape Speed adjustment as below after setting to the test mode.
In the test mode, the tape speed is high during pressing the HI-DUB button.

Procedure:

1. Turn the power switch on.
2. Press the ■ button, ENTER/NEXT button and DISC 3 button simultaneously.
(The "VOLUME" on the fluorescent indicator tube will blink while in the test mode.)
To exit from the test mode, press the I/⏻ button.

Mode: Playback

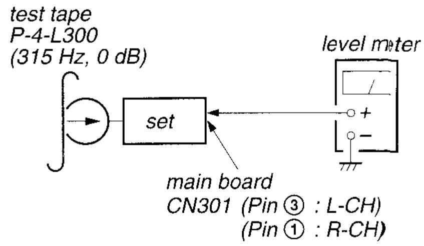

test tape
WS-48B
(3 kHz, 0 dB)
set
frequency counter
+
−
main board
CN301 (Pin ③ : L-CH)
(Pin ① : R-CH)

1. Insert the WS-48B into the deck B.
2. Press the ▷ button on the deck B.
3. Press the HI-DUB button in playback mode.
Then at HIGH speed mode.
4. Adjust RV1001 on the LEAF SW board do that frequency counter reads 6,000 ± 180 Hz.
5. Press the HI-DUB button.
Then back to NORMAL speed mode.
6. Adjust RV1002 on the LEAF SW board so that frequency counter reads 3,000 ± 90 Hz.

Adjustment Location: LEAF SW board
Sample value of Wow and Flutter: 0.3% or less W.RMS (JIS)
(WS-48B)

Playback level Adjustment DECK A DECK B

Procedure:
Mode: Playback


test tape
P-4-L300
(315 Hz, 0 dB)
set
level meter
+
−
main board
CN301 (Pin ③ : L-CH)
(Pin ① : R-CH)

Deck A is RV311 (L-CH) and RV411 (R-CH), Deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level:
CN301 PB level: 301.5 to 338.3 mV (−8.2 to −7.2 dB) level difference between the channels: within ±0.5dB

Adjustment Location: AUDIO board

REC Bias Adjustment DECK B

Procedure:

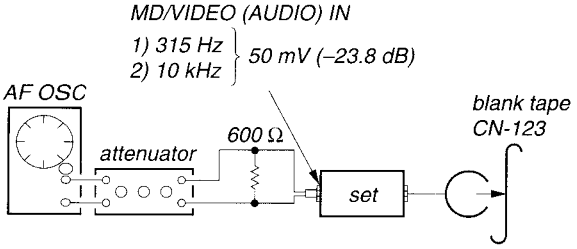
INTRODUCTION

When set to the test mode performed in Tape Speed Adjustment, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.

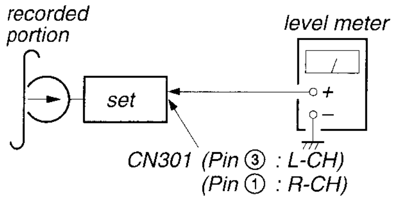
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.

(If do not operation of stopped from recording complete, and press – ◀◀ button then rewind to recording start position.)

1. Press FUNCTION button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B.
3. After press ● REC button, press ❚❚ button, then recording start.
4. Mode: Record


MD/VIDEO (AUDIO) IN
1) 315 Hz
2) 10 kHz
50 mV (–23.8 dB)
AF OSC
attenuator
600 Ω
set
blank tape
CN-123

5. Mode: Playback


recorded portion
level meter
set
+
–
CN301 (Pin ③ : L-CH)
(Pin ① : R-CH)

6. Confirm playback the signal recorded in step 3 become adjustable level as follows.
   If these levels do not adjustable level, adjustment the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 4 and 5.

Adjustable level: Playback output of 315 Hz to playback output of 10 kHz: ±1.0 dB

Adjustment Location: AUDIO board

REC Level Adjustment DECK B

Procedure:

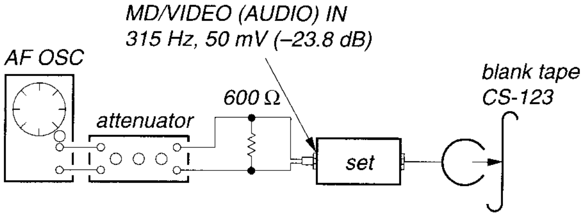
INTRODUCTION

When set to the test mode performed in Tape Speed Adjustment, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.

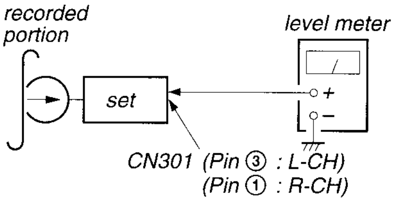
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.

(If do not operation of stopped from recording complete, and press – ◀◀ button then rewind to recording start position.)

1. Press FUNCTION button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B.
3. After press ● REC button, press ❚❚ button, then recording start.
4. Mode: Record


MD/VIDEO (AUDIO) IN
315 Hz, 50 mV (–23.8 dB)
AF OSC
attenuator
600 Ω
set
blank tape
CS-123

5. Mode: Playback


recorded portion
level meter
set
+
–
CN301 (Pin ③ : L-CH)
(Pin ① : R-CH)

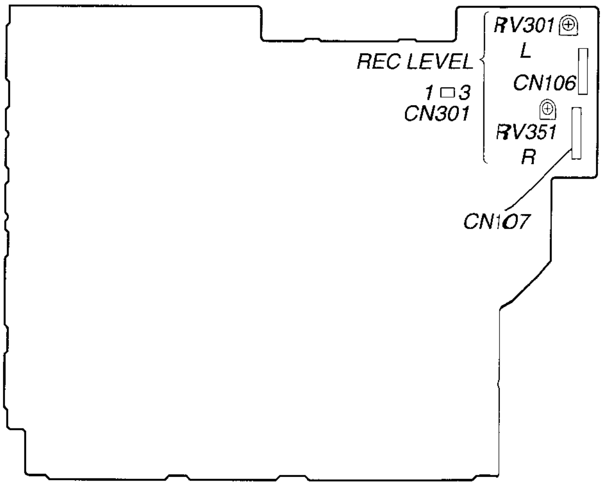
6. Confirm playback the signal recorded in step 3 become adjustable level as follows.
   If these levels do not adjustable level, adjustment the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 4 and 5.

Adjustable level:

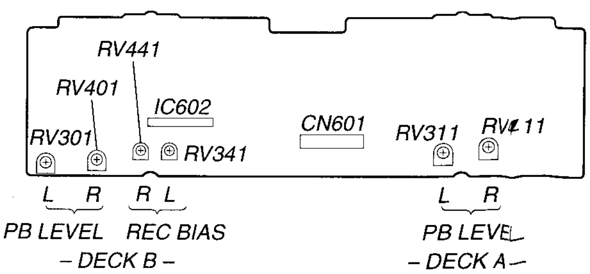
CN301 PB level: 47.2 to 53.0 mV (–24.3 to –23.3 dB)

Adjustment Location: MAIN board

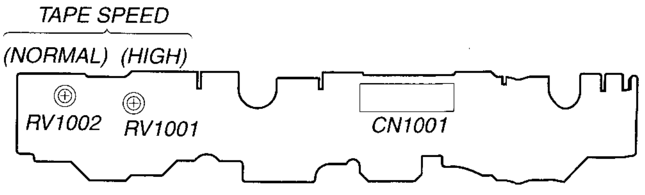
[MAIN BOARD] (Component Side)


RV301
L
CN106
REC LEVEL
1 □ 3
CN301
RV351
R
CN107

[AUDIO BOARD] (Component Side)


RV441
RV401
IC602
RV301
RV341
CN601
RV311
RV411
L R
R L
L R
PB LEVEL
REC BIAS
- DECK B -
PB LEVEL
- DECK A -

[LEAF SW BOARD] (Component Side)


TAPE SPEED
(NORMAL) (HIGH)
RV1002
RV1001
CN1001

TUNER SECTION 0 dB=1 µV

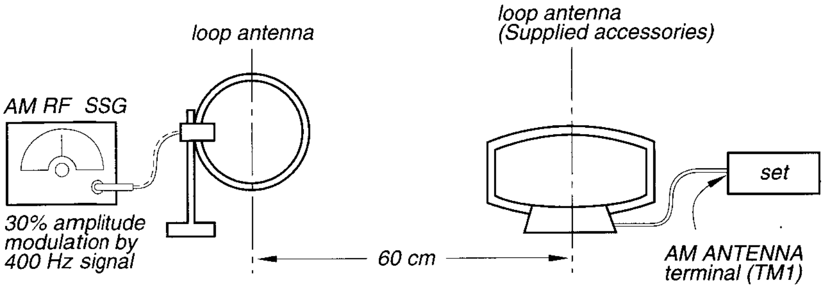
(AEP, German, UK, East European, CIS models only)

Note: As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

AM Section Adjustment

Note: FM Tuned Level Adjustment should be performed after this AM Tuned Level Adjustment.

Setting:


loop antenna
loop antenna
(Supplied accessories)
AM RF SSG
set
30% amplitude modulation by 400 Hz signal
60 cm
AM ANTENNA terminal (TM1)

Field strength dB (µV/m) =SSG output level dB (µV/m) –26 dB.

AM Tuned Level Adjustment

Band: MW

Procedure:

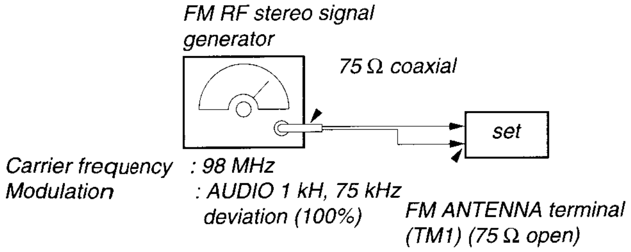
1. Set the output of SSG so that the input level of the set becomes 55 dB.
2. Tune the set to 999 kHz or 1,050 kHz.
3. Adjust RV41 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location : TCB board

FM Section Adjustment

Note: This adjustment should be performed after the AM Tuned Level Adjustment due to the same adjustment element.

Setting:


FM RF stereo signal generator
75 Ω coaxial
set
Carrier frequency : 98 MHz
Modulation : AUDIO 1 kH, 75 kHz deviation (100%)
FM ANTENNA terminal (TM1) (75 Ω open)

FM Tuned Level Adjustment

Band: FM

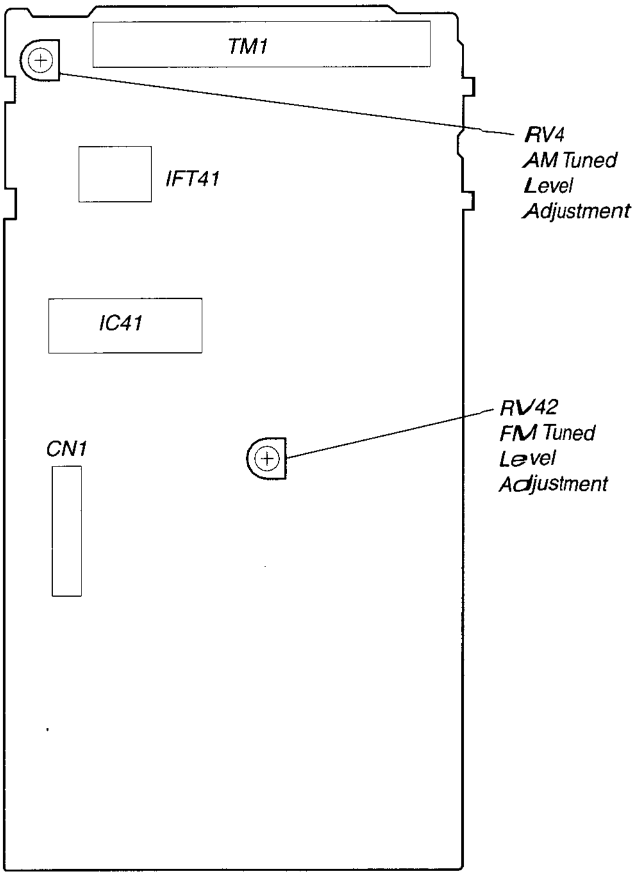
Procedure:

1. Supply a 25 dBµ 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. If the TUNED indicator does not light, adjust RV42 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: TCB board

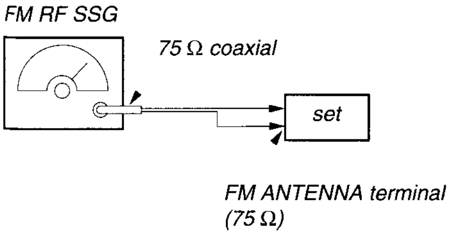
Adjustment Location:

[TCB BOARD] (Component Side)


TM1
IFT41
IC41
CN1
RV4
AM Tuned
Level
Adjustment
RV42
FM Tuned
Level
Adjustment

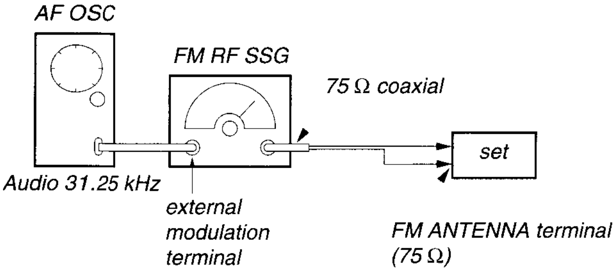
FM Polar Adjustment (East European, CIS models only)

Connection 1:


FM RF SSG
75 Ω coaxial
set
FM ANTENNA terminal
(75 Ω)

Carrier frequency : 69 MHz
Output level : 1mV (60dBμ) (at 75 Ω open)
Modulation : AUDIO 1 kHZ, 10kHz deviation

Connection 2:

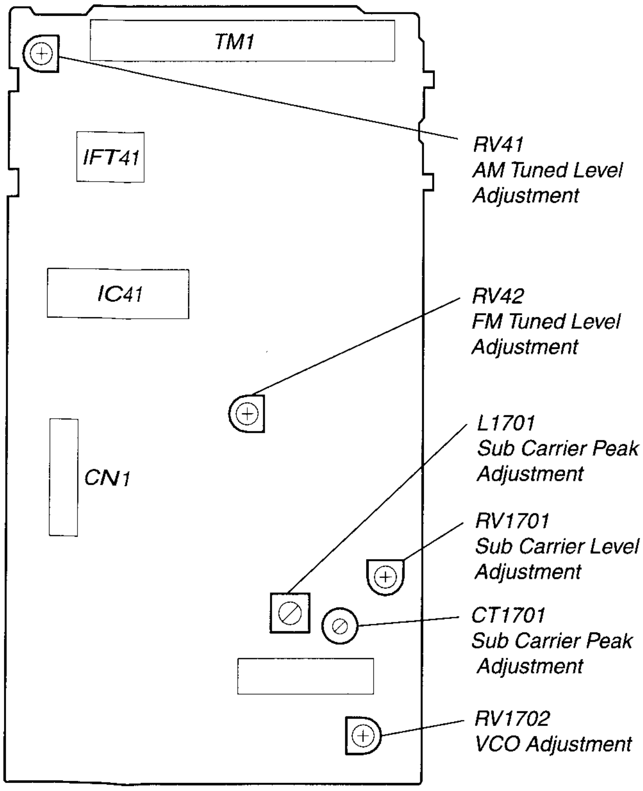

AF OSC
FM RF SSG
75 Ω coaxial
set
Audio 31.25 kHz
external
modulation
terminal
FM ANTENNA terminal
(75 Ω)

Carrier frequency : 69 MHz
Output level : 1mV (60 dBμ) (at 75 Ω open)
Modulation : AUDIO 31.25 kHZ, 10 kHz deviation
(EXTERNAL MODULATION)

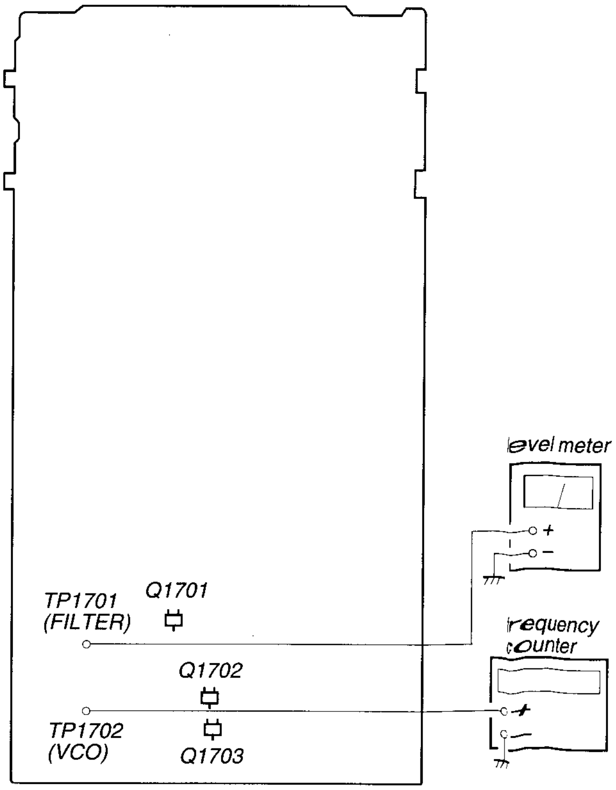
Procedure :

1. Set the modulation of FM RF SSG to AUDIO 1 kHz, 10 kHz deviation according to "Connection 1".
2. Tune the set to 69 MHZ.
3. Adjust the RV1702 so that the reading of frequency counter connected to TP1702 becomes within 31.25 kHz ± 0.05 kHz. (VCO Adjustment)
4. Then record the reading of the level meter connected to TP1701
5. Set the modulation of FM RF SSG to AUDIO 31.25 kHz, 10 kHz deviation according to "Connection 2".
6. Tune the set to 69 MHz.
7. Set the CT1701 to be mechanical center.
8. Adjust the L1701 so that the reading of the level meter connected to TP1701 become maximum.
   Then adjust the CT1701 so that the reading of the level meter connected to TP1701 becomes maximum. (SUB CARRIER PEAK Adjustment)
9. Adjust the RV1701 so that the level at the moment becomes 14dB higher value than the level recorded in step 4. (SUB CARRIER LEVEL Adjustment)

Adjustment Location :
East European, CIS:
[TCB BOARD] (Component Side)


TM1
IFT41
IC41
CN1
RV41
AM Tuned Level
Adjustment
RV42
FM Tuned Level
Adjustment
L1701
Sub Carrier Peak
Adjustment
RV1701
Sub Carrier Level
Adjustment
CT1701
Sub Carrier Peak
Adjustment
RV1702
VCO Adjustment

[TCB BOARD] (Conductor Side)

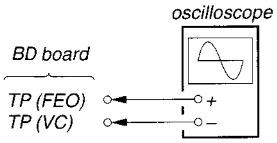

level meter
TP1701
(FILTER)
Q1701
frequency
counter
Q1702
TP1702
(VCO)
Q1703

CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

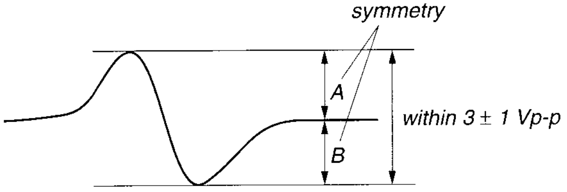
S Curve Check


oscilloscope
BD board
TP (FEO)
TP (VC)
+
–

Procedure:

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (Actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

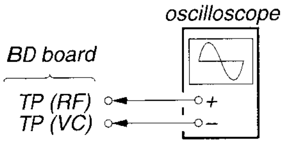
S-curve waveform


symmetry
A
B
within 3 ± 1 Vp-p

6. After check, remove the lead wire connected in step 2.

Note: • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

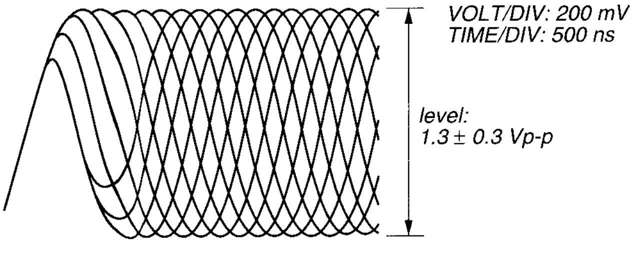

oscilloscope
BD board
TP (RF)
TP (VC)
+
–

Procedure:

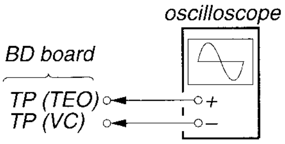
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

- **FR signal**


VOLT/DIV: 200 mV
TIME/DIV: 500 ns
level:
1.3 ± 0.3 Vp-p

E-F Balance (Traverse) check (Without remote commander)

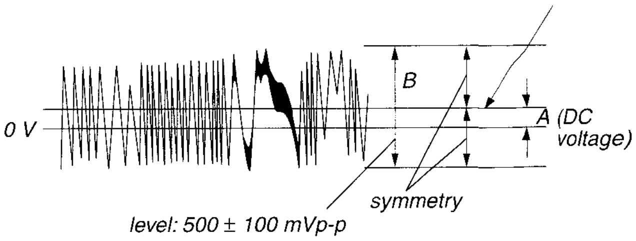

oscilloscope
BD board
TP (TEO)
TP (VC)
+
–

Procedure:

1. Connect oscilloscope to test point TP (TEO) on BD board.
2. Turned Power switch on. Press FUNCTION button to select CD.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the ■ button, ENTER/NEXT button and ►II button simultaneously several times to fluorescent indicator tube display "SHUFFLE" is blink. (The sledding servo is turned OFF.)
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform. Confirm the following:

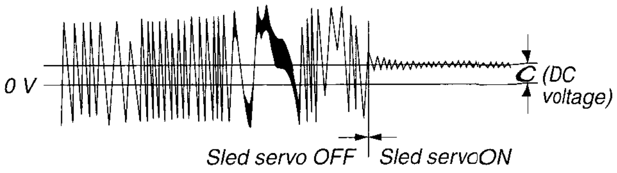
$$\frac{A}{B} \times 100 = \text{less than } \pm 7\ (\%)$$

Traverse waveform


Center of the waveform
B
A (DC voltage)
0 V
symmetry
level: 500 ± 100 mVp-p

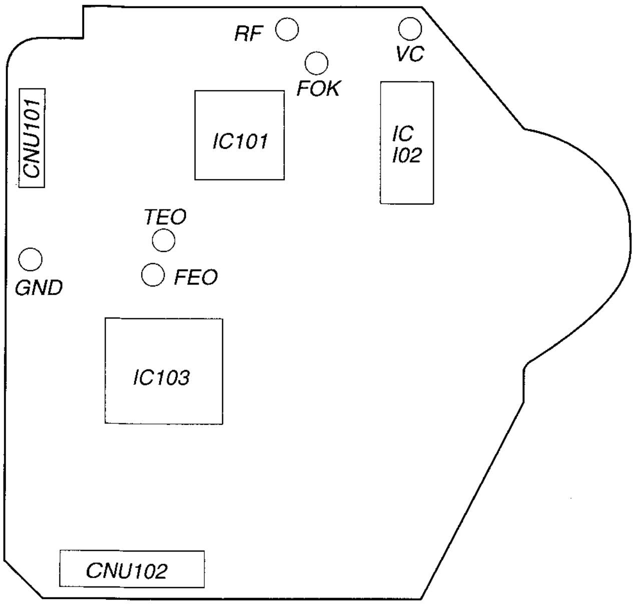
6. Press the ■ button, ENTER/NEXT button and ►II button simultaneously several times to fluorescent indicator tube display "SHUFFLE" is OFF. (The sleding servo is turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 5.

Traverse waveform


C (DC voltage)
0 V
Sled servo OFF
Sled servo ON

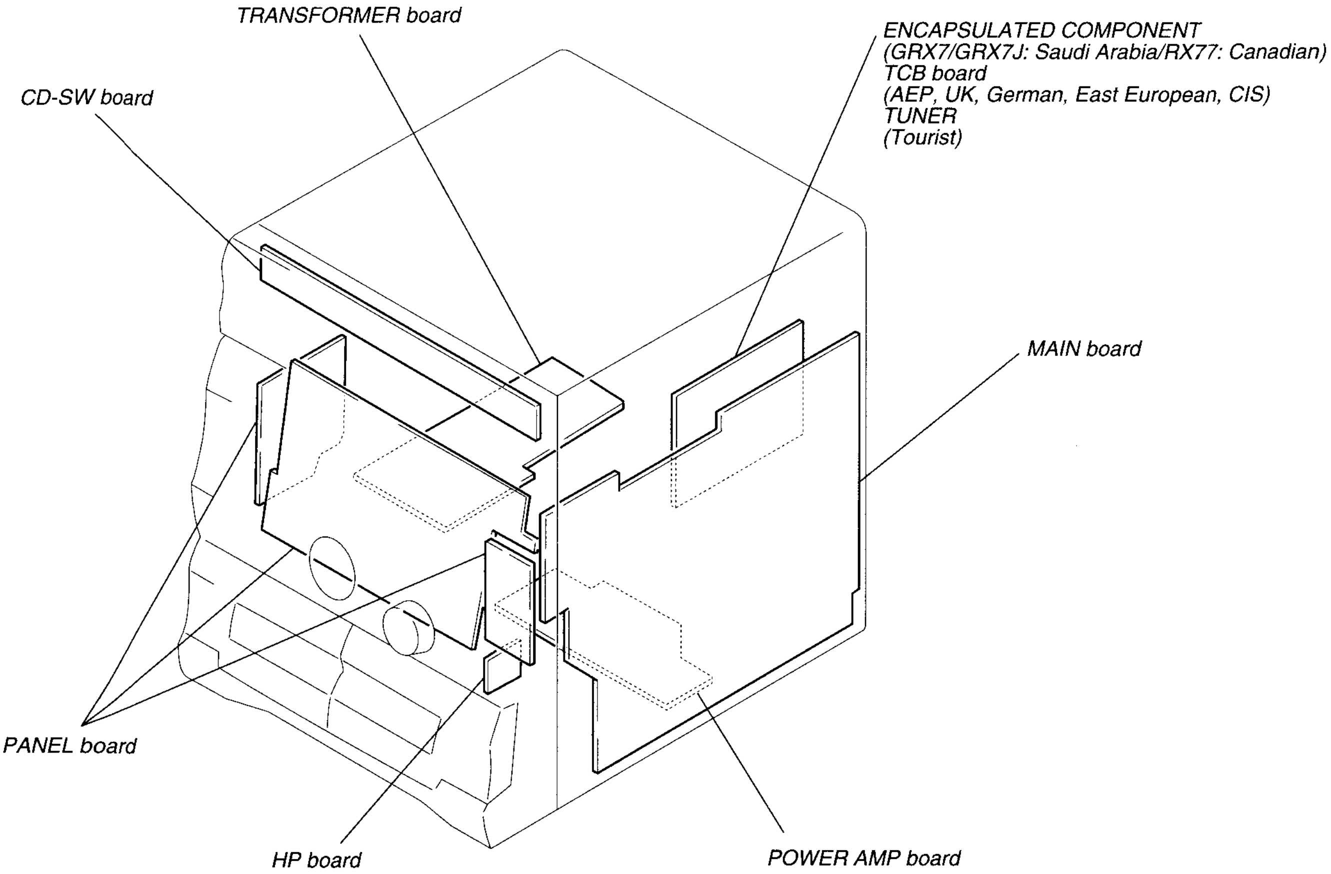
Adjustment Location:

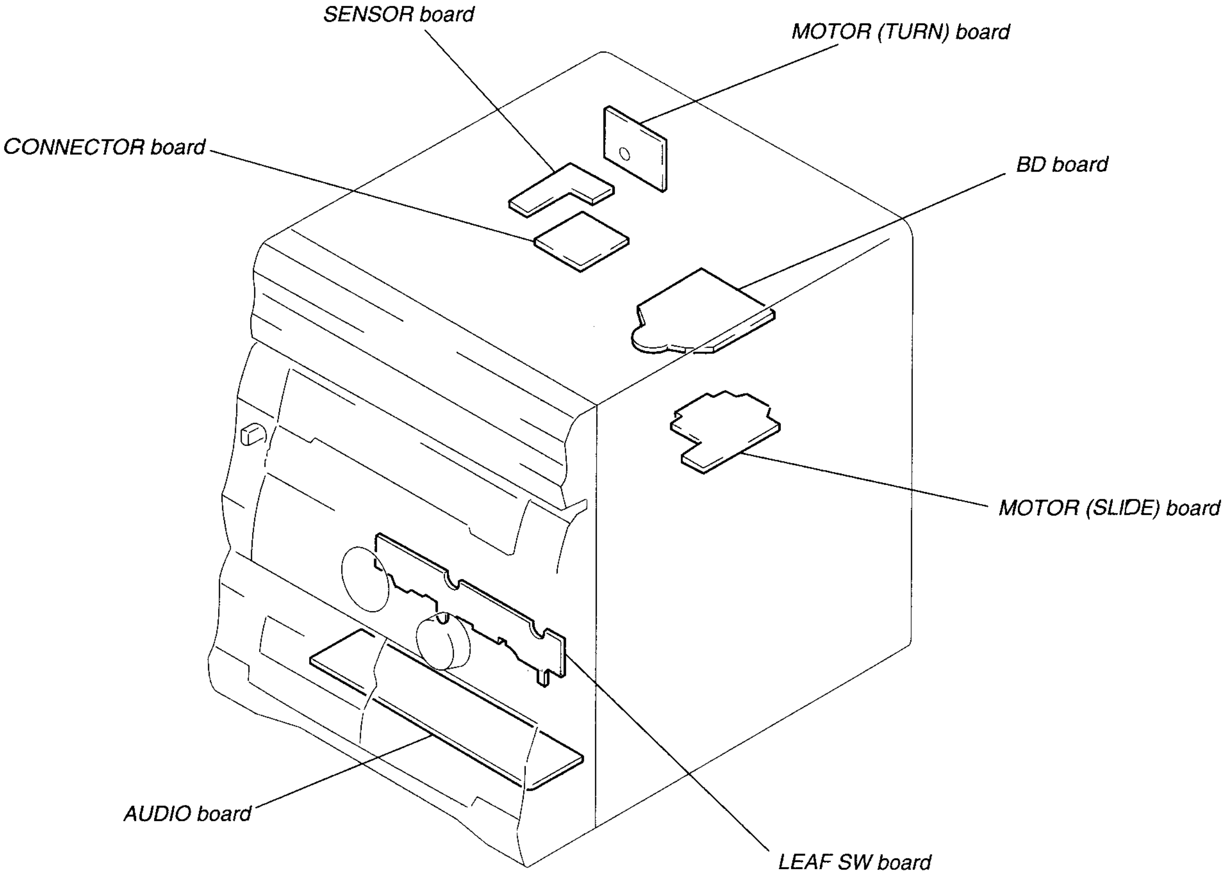
[BD BOARD] (Conductor Side)


RF
VC
FOK
CNU101
IC101
IC
102
TEO
GND
FEO
IC103
CNU102

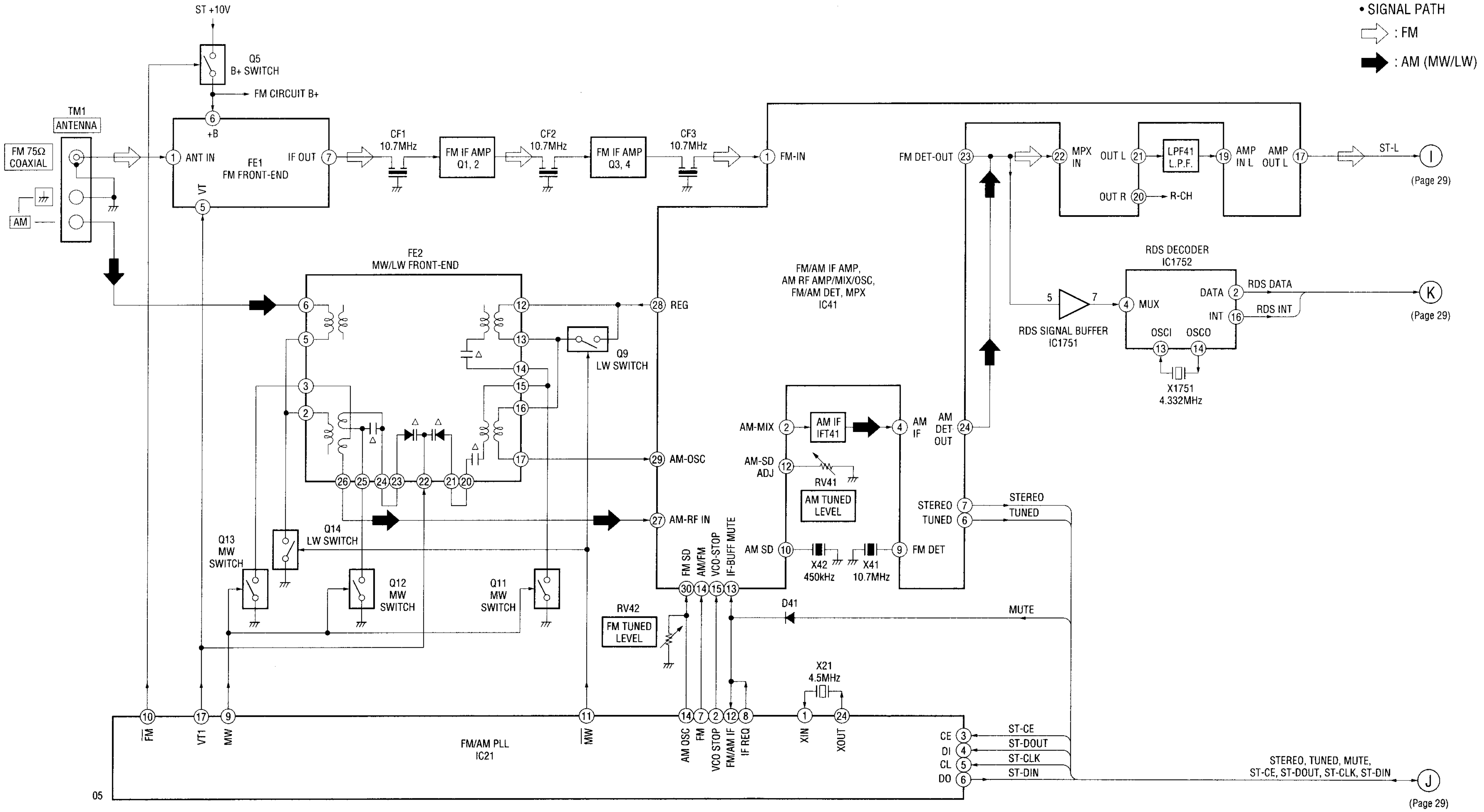
SECTION 7
DIAGRAMS

- **Circuit Boards Location**

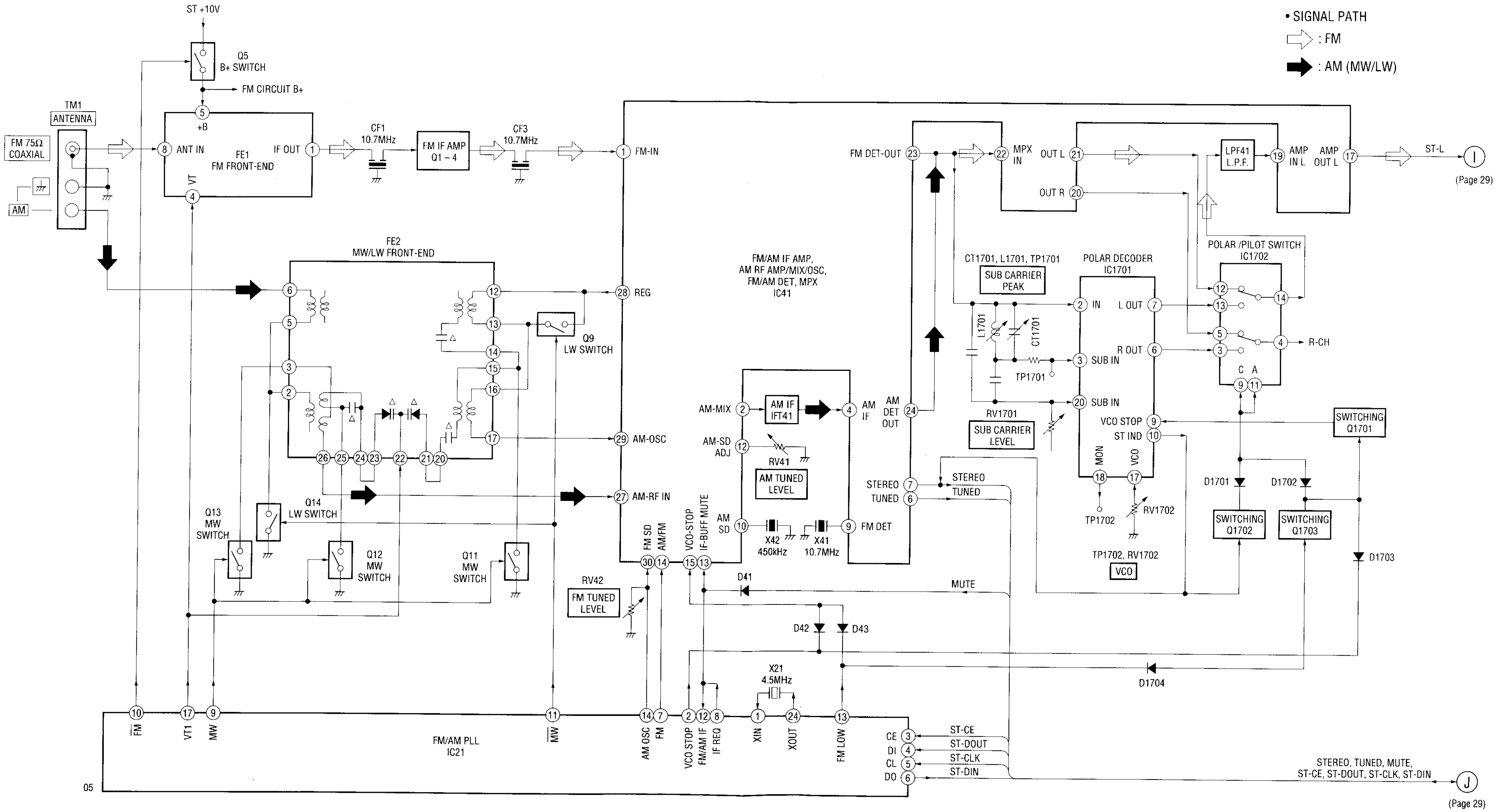

TRANSFORMER board
ENCAPSULATED COMPONENT
(GRX7/GRX7J: Saudi Arabia/RX77: Canadian)
TCB board
(AEP, UK, German, East European, CIS)
TUNER
(Tourist)
CD-SW board
MAIN board
PANEL board
HP board
POWER AMP board


SENSOR board
MOTOR (TURN) board
CONNECTOR board
BD board
MOTOR (SLIDE) board
AUDIO board
LEAF SW board

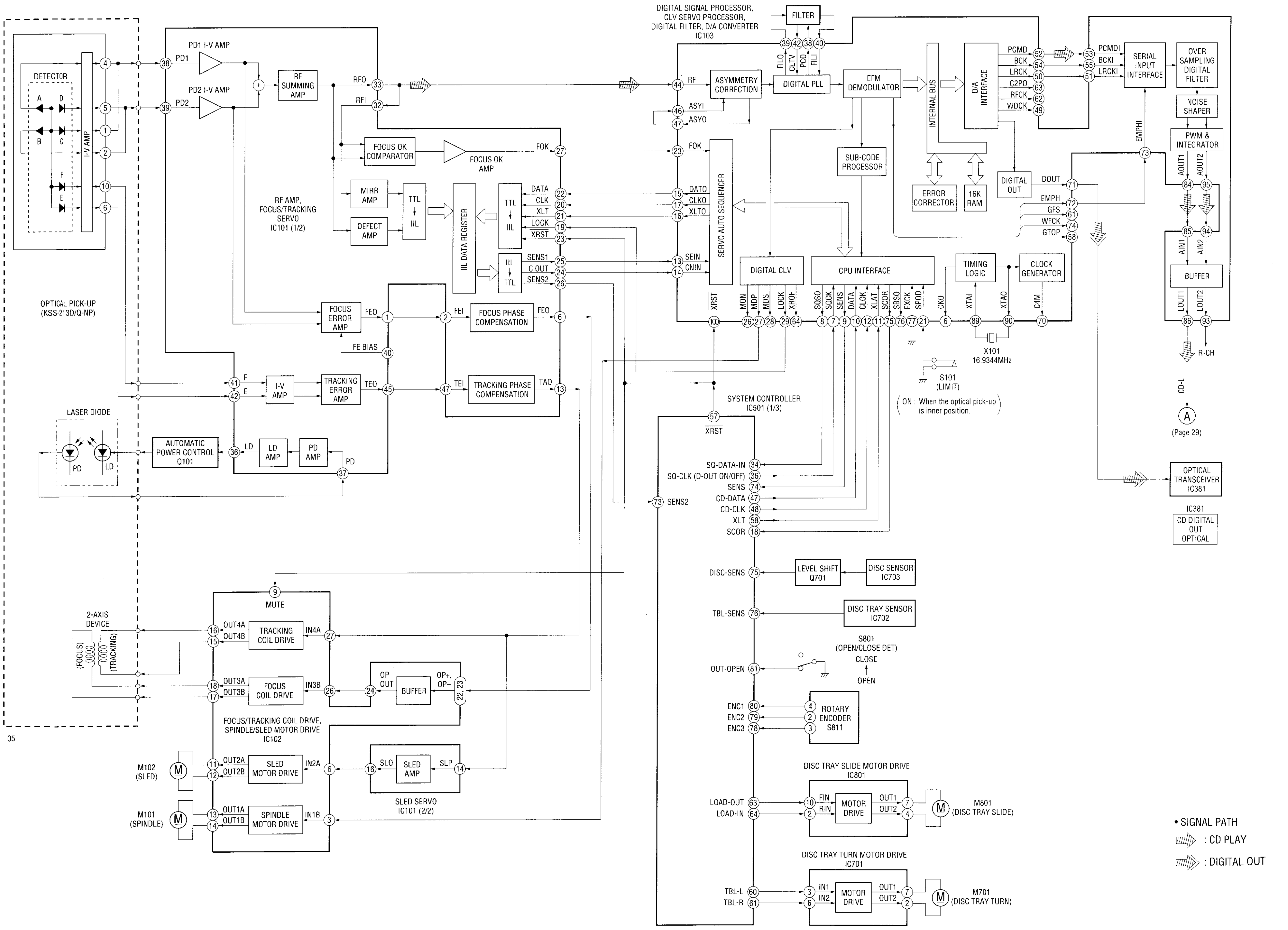
7-1. BLOCK DIAGRAM – TUNER Section (AEP, UK, German models only) –


• SIGNAL PATH
: FM
: AM (MW/LW)
ST +10V
Q5
B+ SWITCH
FM CIRCUIT B+
TM1
ANTENNA
FM 75Ω
COAXIAL
AM
6
+B
1 ANT IN
FE1
FM FRONT-END
IF OUT 7
VT
5
CF1
10.7MHz
FM IF AMP
Q1, 2
CF2
10.7MHz
FM IF AMP
Q3, 4
CF3
10.7MHz
1 FM-IN
FM DET-OUT 23
22 MPX IN
OUT L 21
OUT R 20
R-CH
LPF41
L.P.F.
19 AMP IN L
AMP OUT L 17
ST-L
I
(Page 29)
FE2
MW/LW FRONT-END
6
5
3
2
12
13
14
15
16
17
26 25 24 23 22 21 20
Q9
LW SWITCH
28 REG
29 AM-OSC
27 AM-RF IN
FM/AM IF AMP,
AM RF AMP/MIX/OSC,
FM/AM DET, MPX
IC41
RDS DECODER
IC1752
5
7
RDS SIGNAL BUFFER
IC1751
4 MUX
DATA 2
INT 16
OSCI OSCO
13 14
RDS DATA
RDS INT
K
(Page 29)
X1751
4.332MHz
AM-MIX 2
AM IF
IFT41
4 AM IF
AM DET OUT 24
AM-SD ADJ 12
RV41
AM TUNED LEVEL
AM SD 10
X42
450kHz
X41
10.7MHz
9 FM DET
STEREO 7
TUNED 6
STEREO
TUNED
FM SD
AM/FM
VCO-STOP
IF-BUFF MUTE
30 14 15 13
RV42
FM TUNED LEVEL
D41
MUTE
Q14
LW SWITCH
Q13
MW
SWITCH
Q12
MW
SWITCH
Q11
MW
SWITCH
X21
4.5MHz
10 17 9 11 14 7 2 12 8 1 24
FM
VT1
MW
MW
FM/AM PLL
IC21
AM OSC
FM
VCO STOP
FM/AM IF
IF REQ
XIN
XOUT
CE 3
DI 4
CL 5
DO 6
ST-CE
ST-DOUT
ST-CLK
ST-DIN
STEREO, TUNED, MUTE,
ST-CE, ST-DOUT, ST-CLK, ST-DIN
J
(Page 29)
05

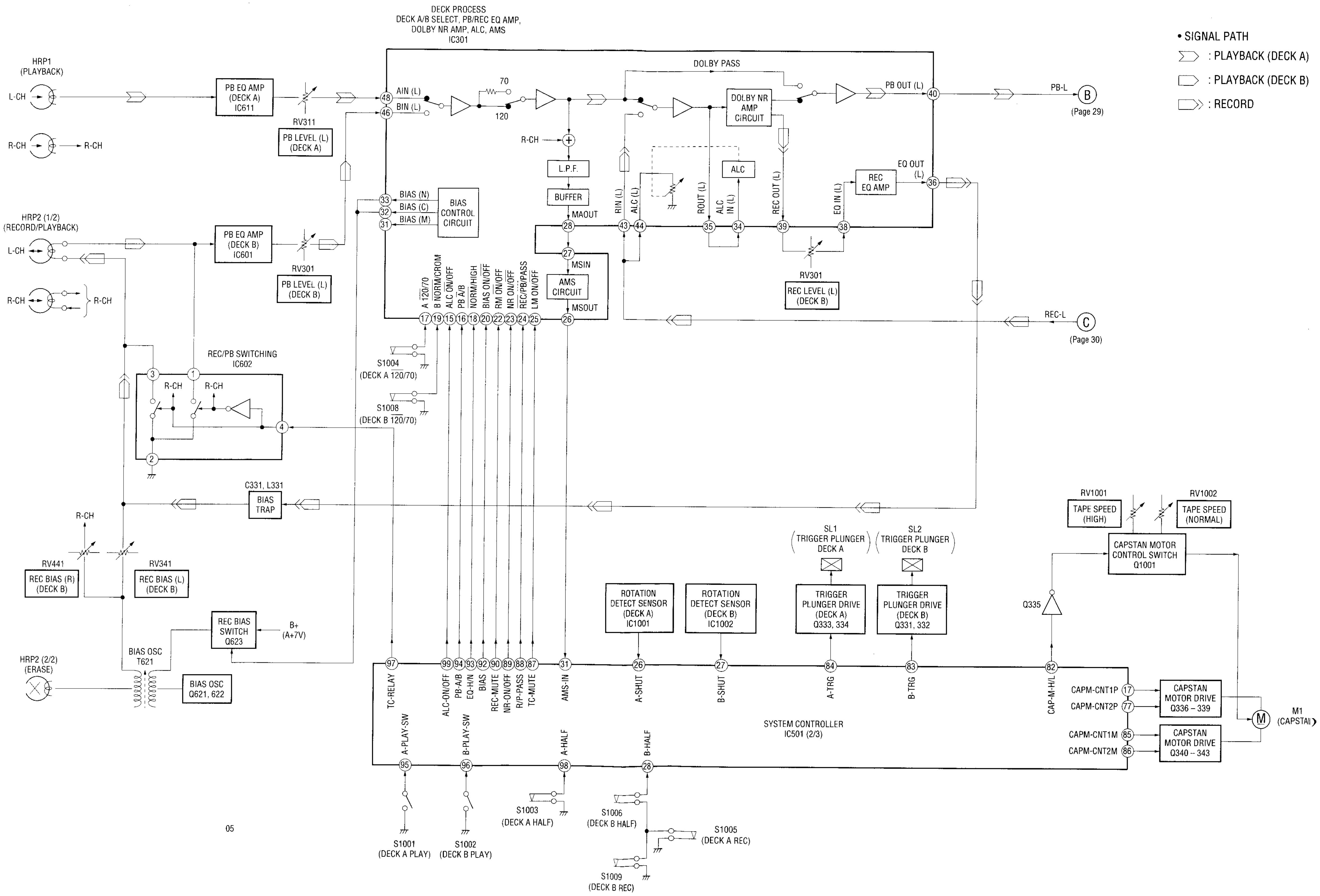
7-2. BLOCK DIAGRAM – TUNER Section (East European, CIS models only) –


• SIGNAL PATH
⇨ : FM
➡ : AM (MW/LW)
ST +10V
Q5
B+ SWITCH
FM CIRCUIT B+
TM1
ANTENNA
FM 75Ω
COAXIAL
AM
+B
ANT IN
FE1
FM FRONT-END
IF OUT
VT
CF1
10.7MHz
FM IF AMP
Q1 – 4
CF3
10.7MHz
FM-IN
FE2
MW/LW FRONT-END
REG
Q9
LW SWITCH
AM-OSC
AM-RF IN
Q14
LW SWITCH
Q13
MW
SWITCH
Q12
MW
SWITCH
Q11
MW
SWITCH
FM/AM IF AMP,
AM RF AMP/MIX/OSC,
FM/AM DET, MPX
IC41
AM-MIX
AM IF
IFT41
AM IF
AM DET OUT
AM-SD
ADJ
RV41
AM TUNED
LEVEL
AM SD
X42
450kHz
X41
10.7MHz
FM DET
FM SD
AM/FM
VCO-STOP
IF-BUFF MUTE
RV42
FM TUNED
LEVEL
STEREO
TUNED
FM DET-OUT
MPX IN
OUT L
OUT R
CT1701, L1701, TP1701
SUB CARRIER
PEAK
L1701
CT1701
TP1701
RV1701
SUB CARRIER
LEVEL
POLAR DECODER
IC1701
IN
SUB IN
SUB IN
L OUT
R OUT
VCO STOP
ST IND
MON
VCO
TP1702
RV1702
TP1702, RV1702
VCO
LPF41
L.P.F.
AMP
IN L
AMP
OUT L
ST-L
(Page 29)
POLAR /PILOT SWITCH
IC1702
R-CH
C A
SWITCHING
Q1701
D1701
D1702
SWITCHING
Q1702
SWITCHING
Q1703
D1703
MUTE
D41
D42
D43
D1704
X21
4.5MHz
FM
VT1
MW
MW
FM/AM PLL
IC21
AM OSC
FM
VCO STOP
FM/AM IF
IF REQ
XIN
XOUT
FM LOW
CE
DI
CL
DO
ST-CE
ST-DOUT
ST-CLK
ST-DIN
STEREO, TUNED, MUTE,
ST-CE, ST-DOUT, ST-CLK, ST-DIN
(Page 29)
05

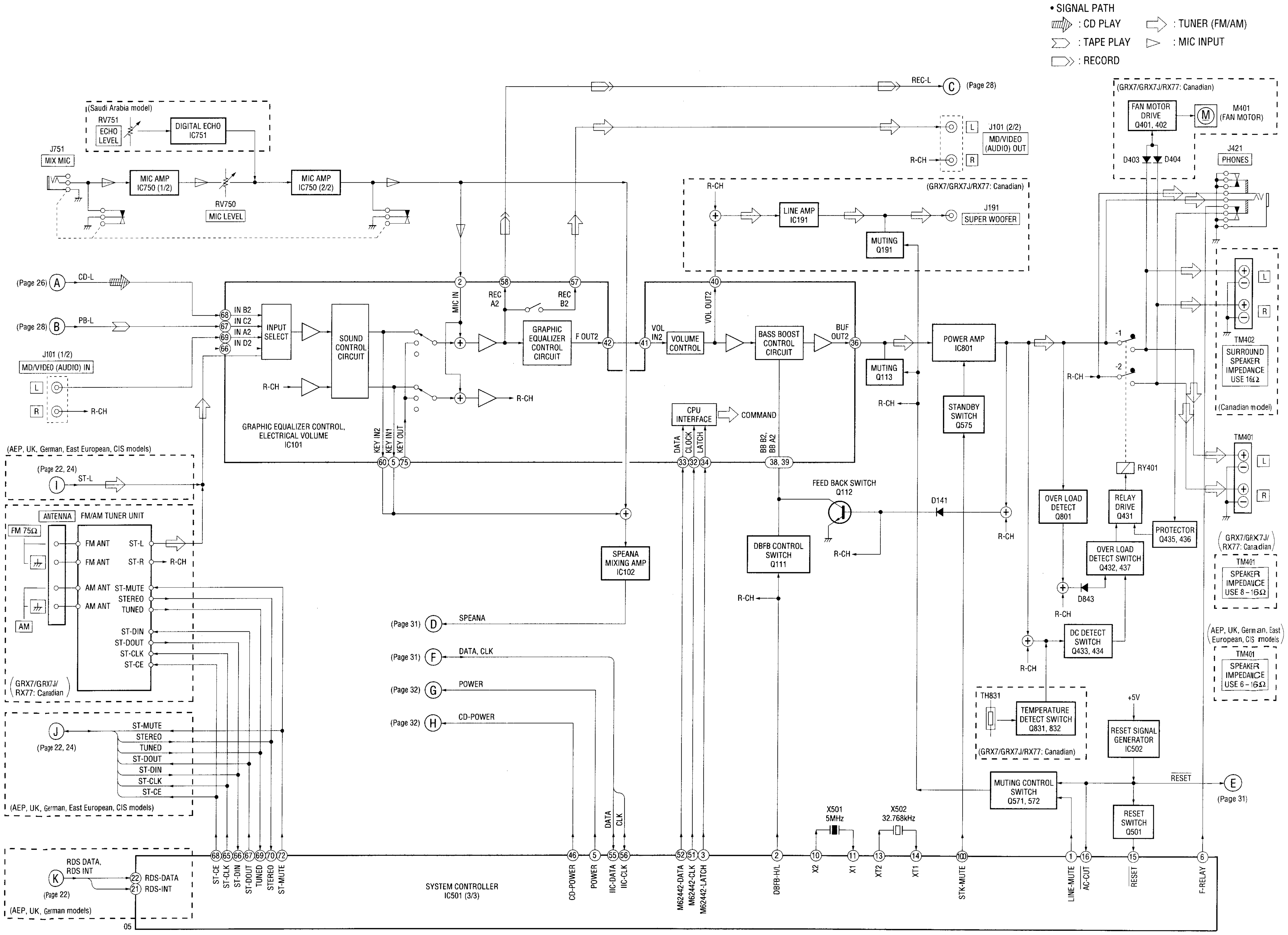
7-3. BLOCK DIAGRAM – CD MECHANISM DECK Section –


DETECTOR
A
D
B
C
F
E
I-V AMP
OPTICAL PICK-UP
(KSS-213D/Q-NP)
LASER DIODE
PD
LD
2-AXIS
DEVICE
(FOCUS)
(TRACKING)
05
PD1 I-V AMP
PD1
PD2 I-V AMP
PD2
RF SUMMING AMP
RFO
RFI
FOCUS OK COMPARATOR
FOCUS OK AMP
FOK
MIRR AMP
DEFECT AMP
TTL
IIL
IIL DATA REGISTER
DATA
CLK
XLT
LOCK
XRST
SENS1
C.OUT
SENS2
RF AMP,
FOCUS/TRACKING
SERVO
IC101 (1/2)
FOCUS ERROR AMP
FEO
FE BIAS
FEI
FOCUS PHASE COMPENSATION
FEO
I-V AMP
F
E
TRACKING ERROR AMP
TEO
TEI
TRACKING PHASE COMPENSATION
TAO
AUTOMATIC POWER CONTROL Q101
LD
LD AMP
PD AMP
PD
DIGITAL SIGNAL PROCESSOR,
CLV SERVO PROCESSOR,
DIGITAL FILTER, D/A CONVERTER
IC103
FILTER
FILO
CLTV
PCO
FILI
RF
ASYMMETRY CORRECTION
ASYI
ASYO
DIGITAL PLL
EFM DEMODULATOR
INTERNAL BUS
D/A INTERFACE
PCMD
BCK
LRCK
C2PO
RFCK
WDCK
SUB-CODE PROCESSOR
ERROR CORRECTOR
16K RAM
DIGITAL OUT
DOUT
EMPH
GFS
WFCK
GTOP
FOK
DATO
CLKO
XLTO
SEIN
CNIN
SERVO AUTO SEQUENCER
DIGITAL CLV
CPU INTERFACE
TIMING LOGIC
CLOCK GENERATOR
XRST
MON
MDP
MDS
LOCK
XROF
SQSO
SQCK
SENS
DATA
CLOK
XLAT
SCOR
SBSO
EXCK
SPOD
CKO
XTAI
XTAO
C4M
X101
16.9344MHz
S101
(LIMIT)
(ON : When the optical pick-up is inner position.)
PCMDI
BCKI
LRCKI
SERIAL INPUT INTERFACE
OVER SAMPLING DIGITAL FILTER
NOISE SHAPER
PWM & INTEGRATOR
EMPHI
AOUT1
AOUT2
AIN1
AIN2
BUFFER
LOUT1
LOUT2
R-CH
CD-L
A
(Page 29)
OPTICAL TRANSCEIVER IC381
IC381
CD DIGITAL OUT OPTICAL
SYSTEM CONTROLLER
IC501 (1/3)
XRST
SQ-DATA-IN
SQ-CLK (D-OUT ON/OFF)
SENS
CD-DATA
CD-CLK
XLT
SCOR
SENS2
DISC-SENS
LEVEL SHIFT Q701
DISC SENSOR IC703
TBL-SENS
DISC TRAY SENSOR IC702
S801
(OPEN/CLOSE DET)
CLOSE
OPEN
OUT-OPEN
ENC1
ENC2
ENC3
ROTARY ENCODER S811
DISC TRAY SLIDE MOTOR DRIVE
IC801
LOAD-OUT
LOAD-IN
FIN
RIN
MOTOR DRIVE
OUT1
OUT2
M801
(DISC TRAY SLIDE)
DISC TRAY TURN MOTOR DRIVE
IC701
TBL-L
TBL-R
IN1
IN2
MOTOR DRIVE
OUT1
OUT2
M701
(DISC TRAY TURN)
MUTE
OUT4A
OUT4B
TRACKING COIL DRIVE
IN4A
OUT3A
OUT3B
FOCUS COIL DRIVE
IN3B
OP OUT
BUFFER
OP+, OP–
FOCUS/TRACKING COIL DRIVE,
SPINDLE/SLED MOTOR DRIVE
IC102
M102
(SLED)
OUT2A
OUT2B
SLED MOTOR DRIVE
IN2A
SLO
SLED AMP
SLP
SLED SERVO
IC101 (2/2)
M101
(SPINDLE)
OUT1A
OUT1B
SPINDLE MOTOR DRIVE
IN1B
M
• SIGNAL PATH
: CD PLAY
: DIGITAL OUT

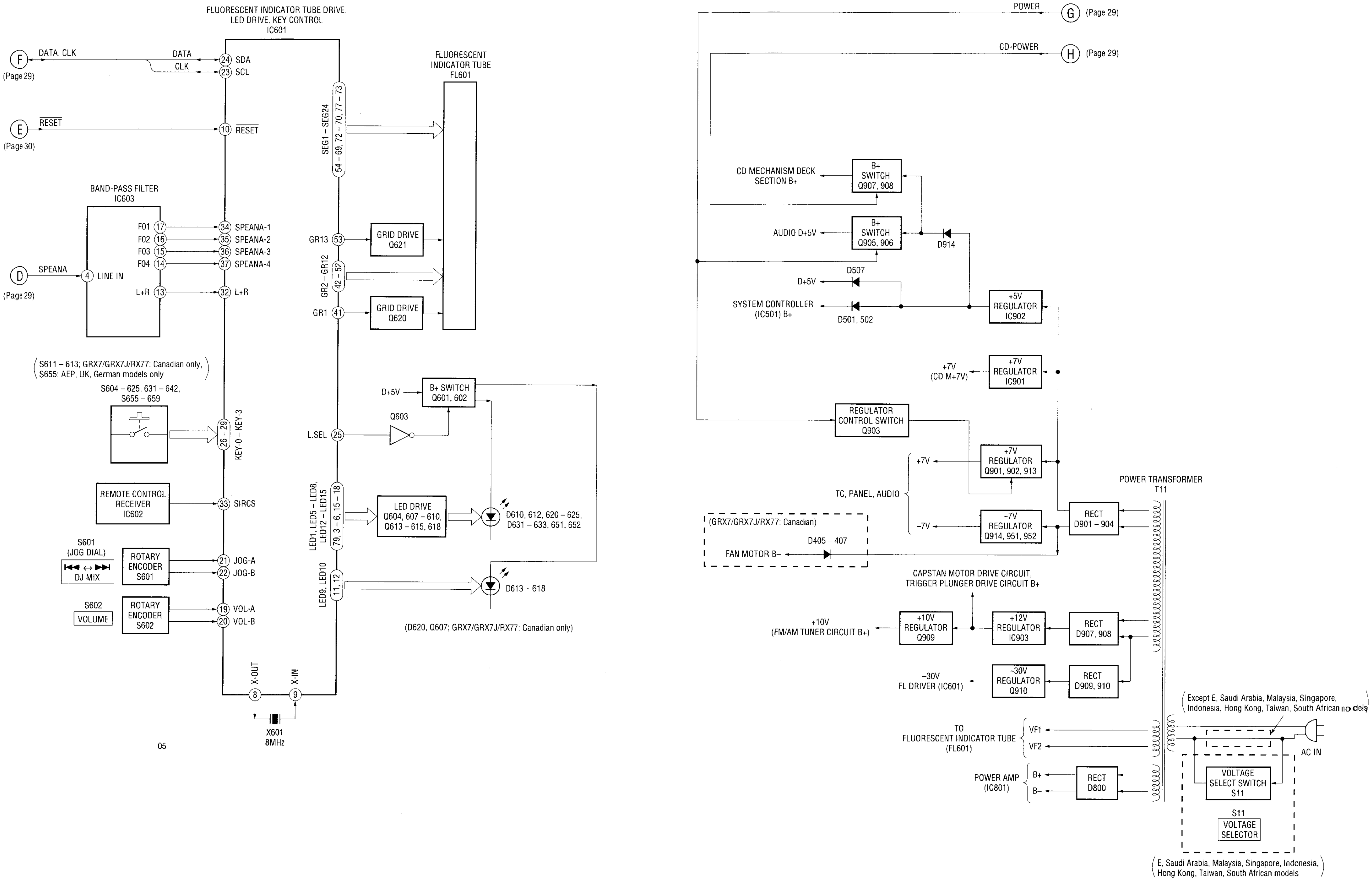
7-4. BLOCK DIAGRAM – TAPE DECK Section –


DECK PROCESS
DECK A/B SELECT, PB/REC EQ AMP,
DOLBY NR AMP, ALC, AMS
IC301
• SIGNAL PATH
: PLAYBACK (DECK A)
: PLAYBACK (DECK B)
: RECORD
HRP1
(PLAYBACK)
L-CH
R-CH
R-CH
PB EQ AMP
(DECK A)
IC611
RV311
PB LEVEL (L)
(DECK A)
AIN (L)
BIN (L)
48
46
70
120
DOLBY PASS
DOLBY NR
AMP
CIRCUIT
PB OUT (L)
40
PB-L
B
(Page 29)
R-CH
L.P.F.
BUFFER
MAOUT
ALC
REC
EQ AMP
EQ OUT
(L)
36
RIN (L)
ALC (L)
ROUT (L)
ALC
IN (L)
REC OUT (L)
EQ IN (L)
28
43
44
35
34
39
38
HRP2 (1/2)
(RECORD/PLAYBACK)
L-CH
R-CH
R-CH
PB EQ AMP
(DECK B)
IC601
RV301
PB LEVEL (L)
(DECK B)
BIAS (N)
BIAS (C)
BIAS (M)
33
32
31
BIAS
CONTROL
CIRCUIT
27
MSIN
AMS
CIRCUIT
MSOUT
26
A 120/70
B NORM/CROM
ALC ON/OFF
PB A/B
NORM/HIGH
BIAS ON/OFF
RM ON/OFF
NR ON/OFF
REC/PB/PASS
LM ON/OFF
17
19
15
16
18
20
22
23
24
25
RV301
REC LEVEL (L)
(DECK B)
REC-L
C
(Page 30)
REC/PB SWITCHING
IC602
3
1
R-CH
R-CH
4
2
S1004
(DECK A 120/70)
S1008
(DECK B 120/70)
C331, L331
BIAS
TRAP
R-CH
RV441
REC BIAS (R)
(DECK B)
RV341
REC BIAS (L)
(DECK B)
REC BIAS
SWITCH
Q623
B+
(A+7V)
BIAS OSC
T621
BIAS OSC
Q621, 622
HRP2 (2/2)
(ERASE)
ROTATION
DETECT SENSOR
(DECK A)
IC1001
ROTATION
DETECT SENSOR
(DECK B)
IC1002
SL1
TRIGGER PLUNGER
DECK A
SL2
TRIGGER PLUNGER
DECK B
TRIGGER
PLUNGER DRIVE
(DECK A)
Q333, 334
TRIGGER
PLUNGER DRIVE
(DECK B)
Q331, 332
RV1001
TAPE SPEED
(HIGH)
RV1002
TAPE SPEED
(NORMAL)
CAPSTAN MOTOR
CONTROL SWITCH
Q1001
Q335
97
99
94
93
92
90
89
88
87
31
26
27
84
83
82
TC-RELAY
ALC-ON/OFF
PB-A/B
EQ-H/N
BIAS
REC-MUTE
NR-ON/OFF
R/P-PASS
TC-MUTE
AMS-IN
A-SHUT
B-SHUT
A-TRG
B-TRG
CAP-M-H/L
CAPM-CNT1P
CAPM-CNT2P
CAPM-CNT1M
CAPM-CNT2M
17
77
85
86
CAPSTAN
MOTOR DRIVE
Q336 – 339
CAPSTAN
MOTOR DRIVE
Q340 – 343
M
M1
(CAPSTAN)
SYSTEM CONTROLLER
IC501 (2/3)
A-PLAY-SW
B-PLAY-SW
A-HALF
B-HALF
95
96
98
28
S1001
(DECK A PLAY)
S1002
(DECK B PLAY)
S1003
(DECK A HALF)
S1006
(DECK B HALF)
S1005
(DECK A REC)
S1009
(DECK B REC)
05

7-5. BLOCK DIAGRAM – MAIN Section –


• SIGNAL PATH
: CD PLAY
: TUNER (FM/AM)
: TAPE PLAY
: MIC INPUT
: RECORD
REC-L
(Page 28)
(Saudi Arabia model)
RV751
ECHO LEVEL
DIGITAL ECHO
IC751
J751
MIX MIC
MIC AMP
IC750 (1/2)
RV750
MIC LEVEL
MIC AMP
IC750 (2/2)
J101 (2/2)
MD/VIDEO (AUDIO) OUT
R-CH
(GRX7/GRX7J/RX77: Canadian)
FAN MOTOR DRIVE
Q401, 402
M401
(FAN MOTOR)
D403
D404
J421
PHONES
LINE AMP
IC191
J191
SUPER WOOFER
MUTING
Q191
(Page 26)
CD-L
(Page 28)
PB-L
J101 (1/2)
MD/VIDEO (AUDIO) IN
IN B2
IN C2
IN A2
IN D2
INPUT SELECT
SOUND CONTROL CIRCUIT
MIC IN
REC A2
REC B2
GRAPHIC EQUALIZER CONTROL CIRCUIT
F OUT2
VOL IN2
VOLUME CONTROL
VOL OUT2
BASS BOOST CONTROL CIRCUIT
BUF OUT2
POWER AMP
IC801
MUTING
Q113
STANDBY SWITCH
Q575
GRAPHIC EQUALIZER CONTROL, ELECTRICAL VOLUME
IC101
KEY IN2
KEY IN1
KEY OUT
CPU INTERFACE
COMMAND
DATA
CLOCK
LATCH
BB B2, BB A2
TM402
SURROUND SPEAKER IMPEDANCE USE 16Ω
(Canadian model)
TM401
(AEP, UK, German, East European, CIS models)
(Page 22, 24)
ST-L
ANTENNA
FM/AM TUNER UNIT
FM 75Ω
FM ANT
AM ANT
AM
ST-R
ST-MUTE
STEREO
TUNED
ST-DIN
ST-DOUT
ST-CLK
ST-CE
(GRX7/GRX7J/RX77: Canadian)
FEED BACK SWITCH
Q112
D141
SPEANA MIXING AMP
IC102
DBFB CONTROL SWITCH
Q111
RY401
OVER LOAD DETECT
Q801
RELAY DRIVE
Q431
PROTECTOR
Q435, 436
OVER LOAD DETECT SWITCH
Q432, 437
D843
(GRX7/GRX7J/RX77: Canadian)
TM401
SPEAKER IMPEDANCE USE 8 – 16Ω
(AEP, UK, German, East European, CIS models)
TM401
SPEAKER IMPEDANCE USE 6 – 16Ω
DC DETECT SWITCH
Q433, 434
(Page 31)
SPEANA
(Page 31)
DATA, CLK
(Page 32)
POWER
(Page 32)
CD-POWER
TH831
TEMPERATURE DETECT SWITCH
Q831, 832
(GRX7/GRX7J/RX77: Canadian)
+5V
RESET SIGNAL GENERATOR
IC502
MUTING CONTROL SWITCH
Q571, 572
RESET
(Page 31)
RESET SWITCH
Q501
X501
5MHz
X502
32.768kHz
(Page 22, 24)
(AEP, UK, German, East European, CIS models)
RDS DATA, RDS INT
(Page 22)
RDS-DATA
RDS-INT
(AEP, UK, German models)
ST-CE
ST-CLK
ST-DIN
ST-DOUT
TUNED
STEREO
ST-MUTE
SYSTEM CONTROLLER
IC501 (3/3)
CD-POWER
POWER
IIC-DATA
IIC-CLK
M62442-DATA
M62442-CLK
M62442-LATCH
DBFB-H/L
X2
X1
XT2
XT1
STK-MUTE
LINE-MUTE
AC-CUT
RESET
F-RELAY
05

7-6. BLOCK DIAGRAM – DISPLAY/KEY CONTROL/POWER SUPPLY Section –


FLUORESCENT INDICATOR TUBE DRIVE, LED DRIVE, KEY CONTROL IC601
F DATA, CLK (Page 29)
DATA
CLK
24 SDA
23 SCL
E RESET (Page 30)
10 RESET
BAND-PASS FILTER IC603
F01 17
F02 16
F03 15
F04 14
L+R 13
34 SPEANA-1
35 SPEANA-2
36 SPEANA-3
37 SPEANA-4
32 L+R
D SPEANA (Page 29)
4 LINE IN
S611 – 613; GRX7/GRX7J/RX77: Canadian only, S655; AEP, UK, German models only
S604 – 625, 631 – 642, S655 – 659
26 – 29 KEY-0 – KEY-3
REMOTE CONTROL RECEIVER IC602
33 SIRCS
S601 (JOG DIAL) ⏮ ↔ ⏭ DJ MIX
ROTARY ENCODER S601
21 JOG-A
22 JOG-B
S602 VOLUME
ROTARY ENCODER S602
19 VOL-A
20 VOL-B
X-OUT 8
X-IN 9
X601 8MHz
05
SEG1 – SEG24 54 – 69, 72 – 70, 77 – 73
FLUORESCENT INDICATOR TUBE FL601
GR13 53
GRID DRIVE Q621
GR2 – GR12 42 – 52
GR1 41
GRID DRIVE Q620
D+5V
B+ SWITCH Q601, 602
Q603
L.SEL 25
LED1, LED5 – LED8, LED12 – LED15 79, 3 – 6, 15 – 18
LED DRIVE Q604, 607 – 610, Q613 – 615, 618
D610, 612, 620 – 625, D631 – 633, 651, 652
LED9, LED10 11, 12
D613 – 618
(D620, Q607; GRX7/GRX7J/RX77: Canadian only)
POWER G (Page 29)
CD-POWER H (Page 29)
CD MECHANISM DECK SECTION B+
B+ SWITCH Q907, 908
AUDIO D+5V
B+ SWITCH Q905, 906
D914
D507
D+5V
SYSTEM CONTROLLER (IC501) B+
D501, 502
+5V REGULATOR IC902
+7V (CD M+7V)
+7V REGULATOR IC901
REGULATOR CONTROL SWITCH Q903
+7V
+7V REGULATOR Q901, 902, 913
TC, PANEL, AUDIO
–7V
–7V REGULATOR Q914, 951, 952
RECT D901 – 904
POWER TRANSFORMER T11
(GRX7/GRX7J/RX77: Canadian)
D405 – 407
FAN MOTOR B–
CAPSTAN MOTOR DRIVE CIRCUIT, TRIGGER PLUNGER DRIVE CIRCUIT B+
+10V (FM/AM TUNER CIRCUIT B+)
+10V REGULATOR Q909
+12V REGULATOR IC903
RECT D907, 908
–30V FL DRIVER (IC601)
–30V REGULATOR Q910
RECT D909, 910
Except E, Saudi Arabia, Malaysia, Singapore, Indonesia, Hong Kong, Taiwan, South African models
TO FLUORESCENT INDICATOR TUBE (FL601)
VF1
VF2
AC IN
POWER AMP (IC801)
B+
B–
RECT D800
VOLTAGE SELECT SWITCH S11
S11 VOLTAGE SELECTOR
E, Saudi Arabia, Malaysia, Singapore, Indonesia, Hong Kong, Taiwan, South African models

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- B+ : B+ Line.
- B– : B– Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM
  - ⊳ : PB (DECK A)
  - ▷ : PB (DECK B)
  - ▷» : REC (DECK B)
  - ⇨ : CD
  - ⇨» : digital out
  - ▷ : Mic in
- Abbreviation

AUS	: Australian model.
CND	: Canadian model.
E2	: 120 V AC Area in E model.
E3	: 240 V AC Area in E model.
EA3	: Saudi Arabia model.
EA4	: Israel model.
EE	: East European model.
G	: German model.
HK	: Hong Kong model.
IA	: Indonesian model.
JE	: Tourist model.
MX	: Mexican model.
MY	: Malaysia model.
SAF	: South African model.
SP	: Singapore model.
TH	: Thai model.
TW	: Taiwan model.

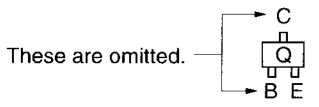
Note on Printed Wiring Boards:

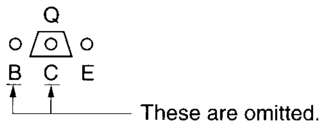
- o——— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ○ : Through hole.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor.

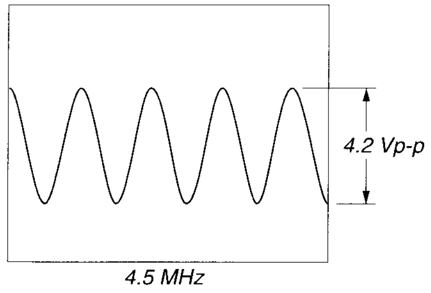




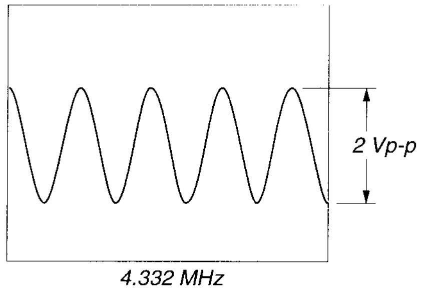
- **Waveforms**

– TUNER Section –
(AEP, UK, German)

❶ IC21 ㉔ (XOUT)

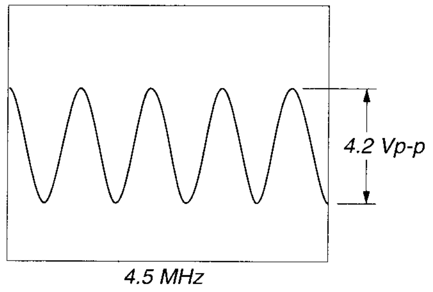


❷ IC1752 ⑭ (OEC0)



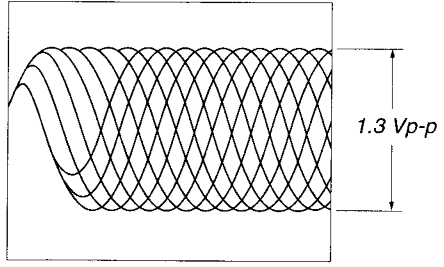
– TUNER Section –
(East European, CIS)

❶ IC21 ㉔ (XOUT)

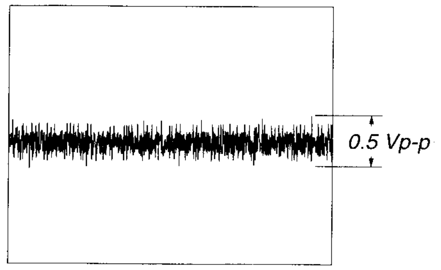


– CD Section –

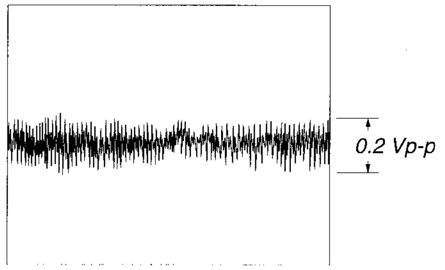
❶ IC101 ㉝ (RF O) (PLAY MODE)



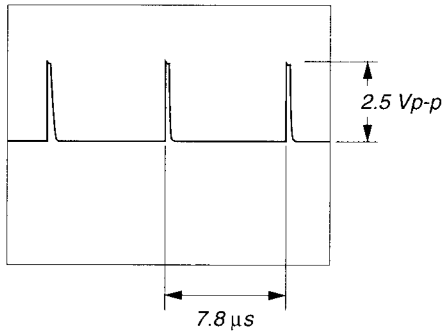
❷ IC101 ② (FEI) (PLAY MODE)



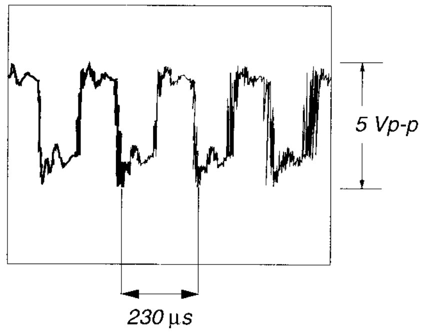
❸ IC101 ㊼ (TEI) (PLAY MODE)



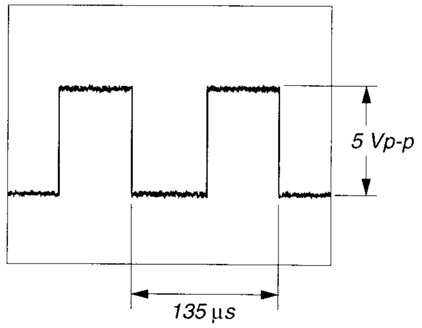
❹ IC103 ㉗ (MDP)



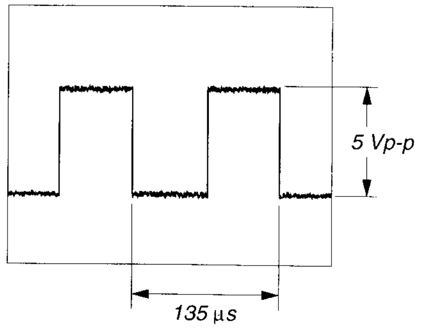
❺ IC103 ㊿ (XPCK)



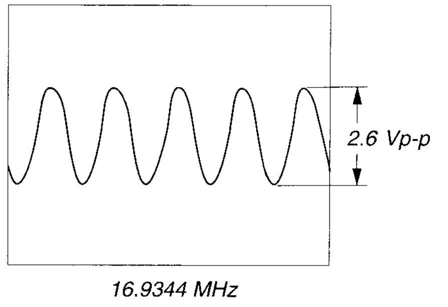
❻ IC103 (62) (RFCK)



❼ IC103 (74) (WFCK)

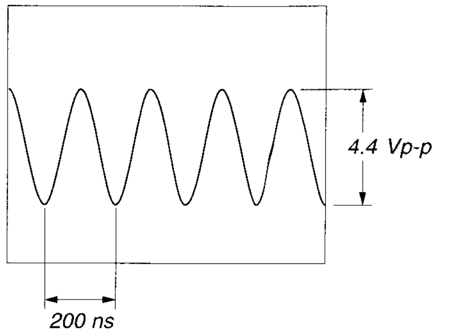


❽ IC103 (89) (XTAI)

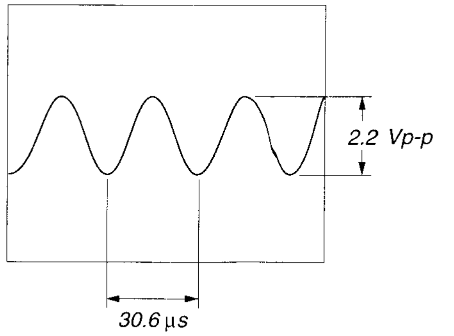


– MAIN Section –

❶ IC501 ⑪ (X1)

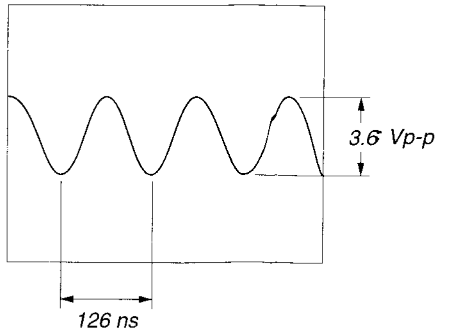


❷ IC501 ⑭ (XT1)



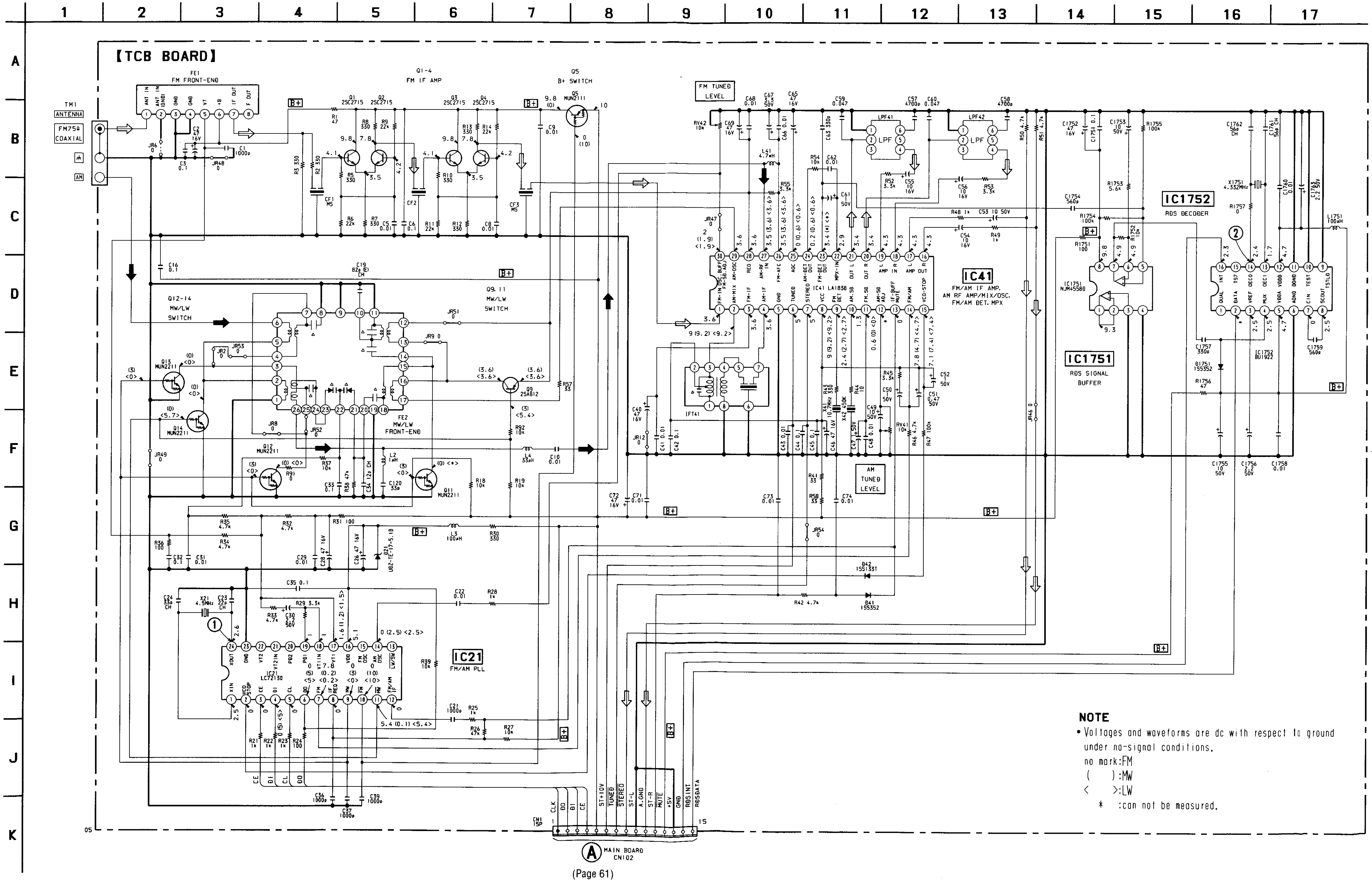
– PANEL Section –

❸ IC601 ⑨ (X-IN)



7-7. SCHEMATIC DIAGRAM –TUNER Section (AEP, UK, German models only) –

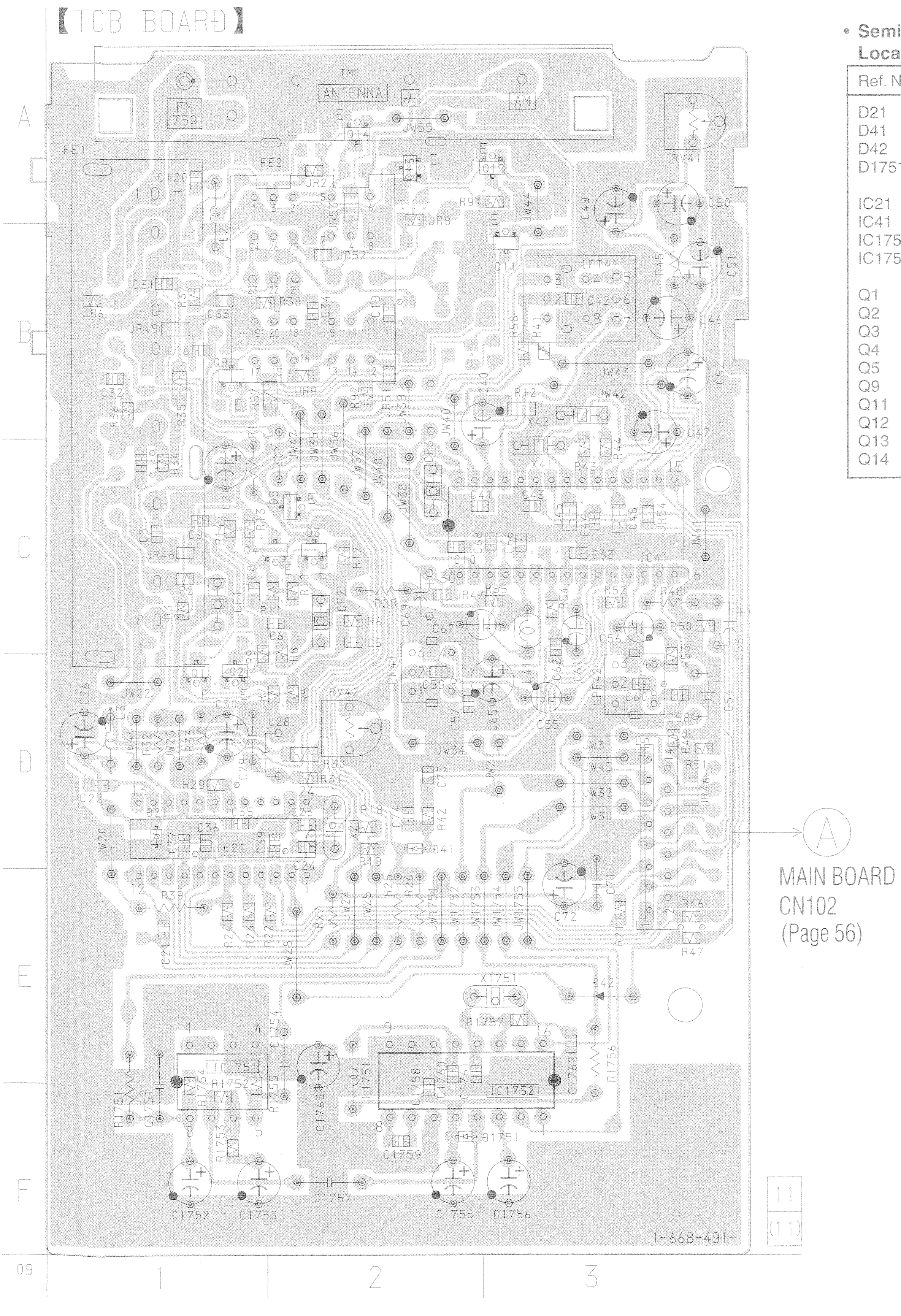
- See page 33 for Note on Schematic Diagram.
- See page 34 for Waveforms. • See page 77 and 78 for IC Block Diagrams.


【TCB BOARD】
TM1 ANTENNA
FM75Ω COAXIAL
AM
FE1 FM FRONT-END
Q1-4 FM IF AMP
Q5 B+ SWITCH
Q12-14 MW/LW SWITCH
Q9, 11 MW/LW SWITCH
FE2 MW/LW FRONT-END
FM TUNED LEVEL
AM TUNED LEVEL
LPF41
LPF42
IC41 FM/AM IF AMP. AM RF AMP/MIX/OSC. FM/AM DET. MPX
IC41 LA1838
IC1751 RDS SIGNAL BUFFER
IC1751 NJM4558D
IC1752 RDS DECODER
IC1752 BU1922
IC21 FM/AM PLL
IC21 LC72130
IFT41
X21 4.5MHz
X1751 4.332MHz
CN1 15P
CLK DO DI CE ST+10V TUNED STEREO ST-L A.GND ST-R MUTE +5V GND RDS INT RDS DATA
A MAIN BOARD CN102
(Page 61)

NOTE
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:FM
( ) :MW
< >:LW
* :can not be measured.

7-8. PRINTED WIRING BOARD – TUNER Section (AEP, UK, German models only) –

- See page 20 for Circuit Boards Location.
- See page 33 for Note on Printed Wiring Board.

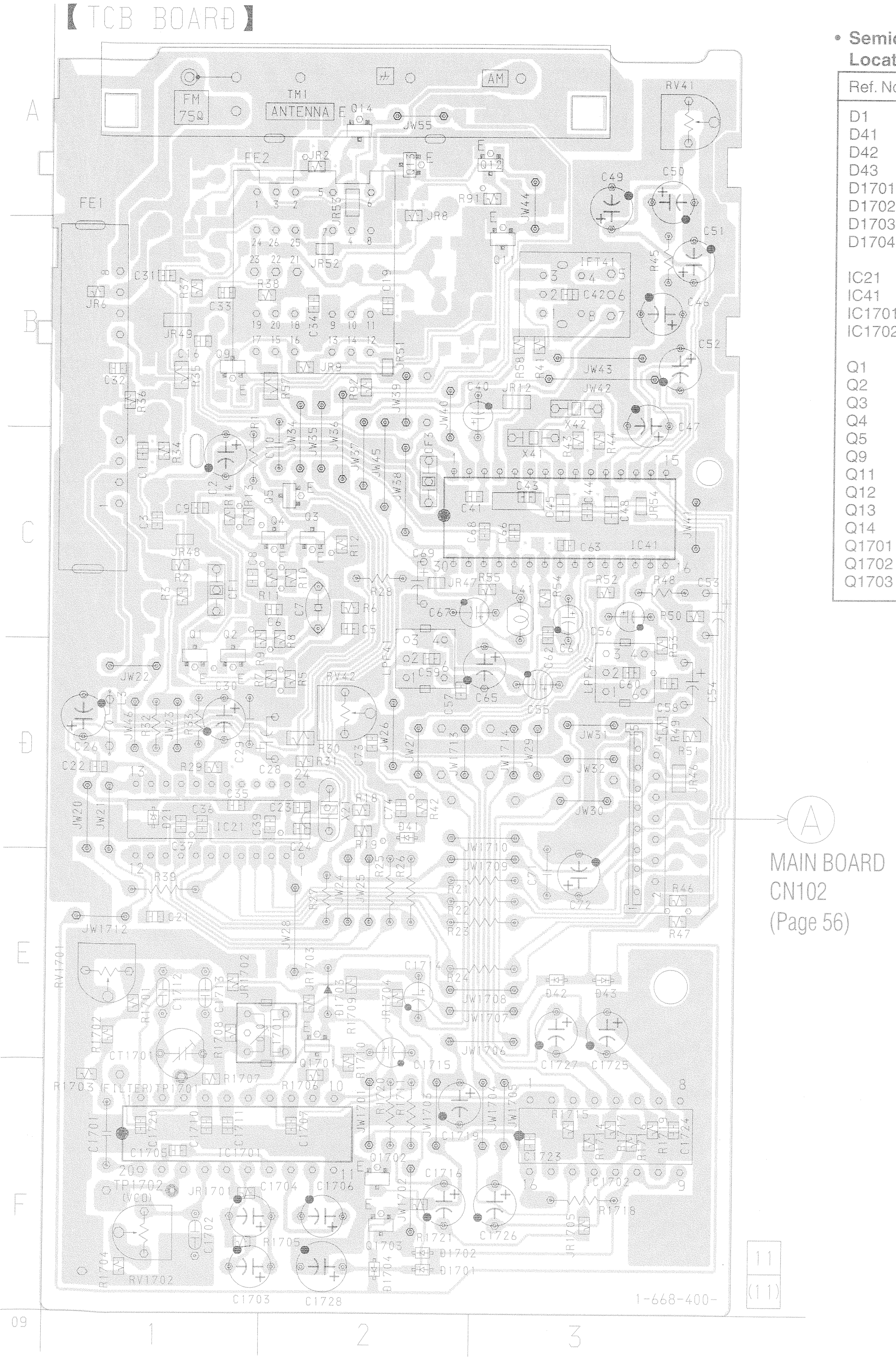

【TCB BOARD】
TM1
ANTENNA
FM 75Ω
AM
FE1
FE2
RV41
RV42
IFT41
IC41
IC21
IC1751
IC1752
X1751
A
MAIN BOARD CN102 (Page 56)
1-668-491-
11
(11)
09
A
B
C
D
E
F
1
2
3

Semiconductor Location

Ref. No.	Location
D21	D-1
D41	D-2
D42	E-3
D1751	F-2
IC21	D-1
IC41	C-3
IC1751	E-1
IC1752	F-3
Q1	D-1
Q2	D-1
Q3	C-2
Q4	C-2
Q5	C-2
Q9	B-1
Q11	B-3
Q12	A-3
Q13	A-2
Q14	A-2

7-9. PRINTED WIRING BOARD – TUNER Section (East European, CIS models only) –

- See page 20 for Circuit Boards Location.
- See page 33 for Note on Printed Wiring Board.

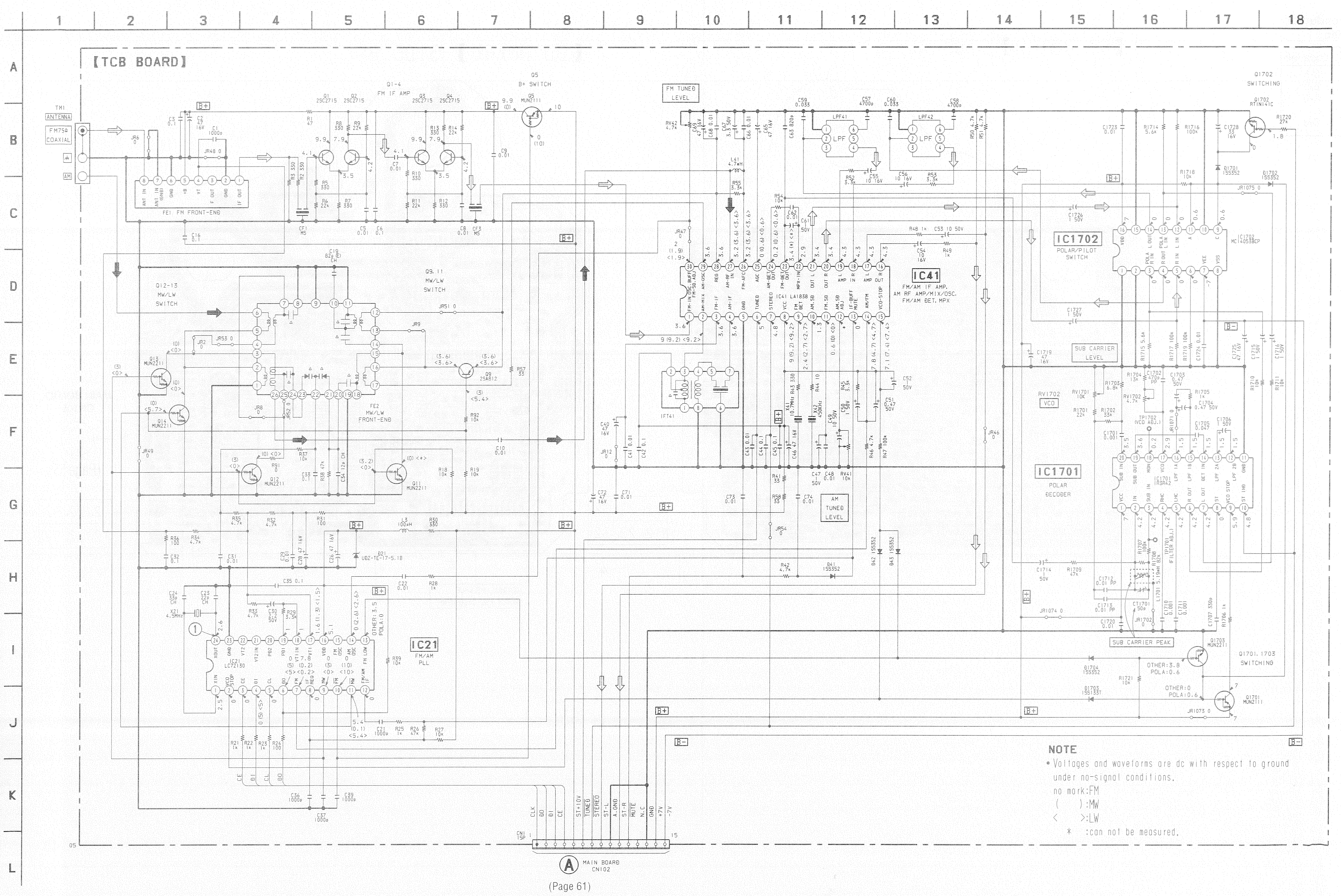

【TCB BOARD】
FM 75Ω
TM1
ANTENNA
AM
RV41
FE1
FE2
IFT41
IC41
IC21
IC1701
IC1702
X41
X42
RV42
RV1701
RV1702
CT1701
TP1701
TP1702 (VCO)
R1703 (FILTER)
A
B
C
D
E
F
1
2
3
09
MAIN BOARD
CN102
(Page 56)
1-668-400-
11
(11)

• Semiconductor Location

Ref. No.	Location
D1	D-1
D41	D-2
D42	E-3
D43	E-3
D1701	F-2
D1702	F-2
D1703	E-2
D1704	F-2
IC21	D-1
IC41	C-3
IC1701	F-1
IC1702	F-3
Q1	D-1
Q2	D-2
Q3	C-2
Q4	C-2
Q5	C-2
Q9	B-1
Q11	B-3
Q12	A-3
Q13	A-2
Q14	A-2
Q1701	E-2
Q1702	F-2
Q1703	F-2

7-10. SCHEMATIC DIAGRAM – TUNER Section (East European, CIS models only) –

• See page 33 for Note on Schematic Diagram. • See page 34 for Waveforms. • See page 77 and 78 for IC Block Diagrams.


[TCB BOARD]
TM1 ANTENNA
FM75Ω COAXIAL
AM
FE1 FM FRONT-END
Q1-4 FM IF AMP
Q5 B+ SWITCH
Q12-13 MW/LW SWITCH
Q9, 11 MW/LW SWITCH
FE2 MW/LW FRONT-END
IC21 FM/AM PLL
IC21 LC72130
IC41 FM/AM IF AMP, AM RF AMP/MIX/OSC, FM/AM DET, MPX
IC41 LA1838
FM TUNED LEVEL
AM TUNED LEVEL
LPF41
LPF42
IFT41
IC1702 POLAR/PILOT SWITCH
IC1702 MC14053BCP
IC1701 POLAR DECODER
SUB CARRIER LEVEL
SUB CARRIER PEAK
RV1702 VCO
Q1702 SWITCHING
Q1701, 1703 SWITCHING
CN1 15P
A MAIN BOARD CN102
(Page 61)
CLK
DO
DI
CE
ST+10V
TUNED
STEREO
ST-L
A.GND
ST-R
MUTE
N.C
GND
+7V
-7V

NOTE

• Voltages and waveforms are dc with respect to ground under no-signal conditions.

no mark:FM

( ):MW

< >:LW

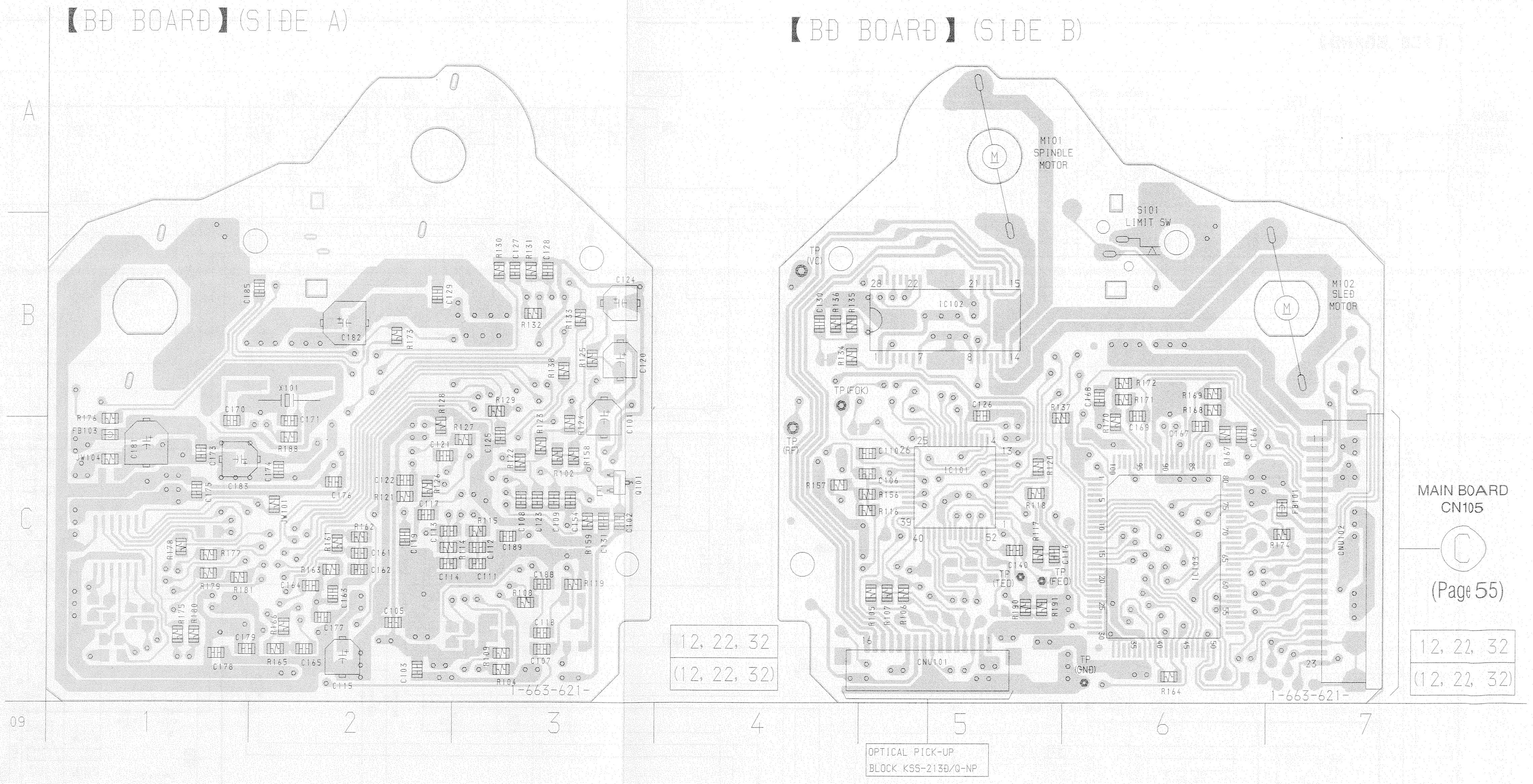
* :can not be measured.

7-11. PRINTED WIRING BOARD – CD Section –

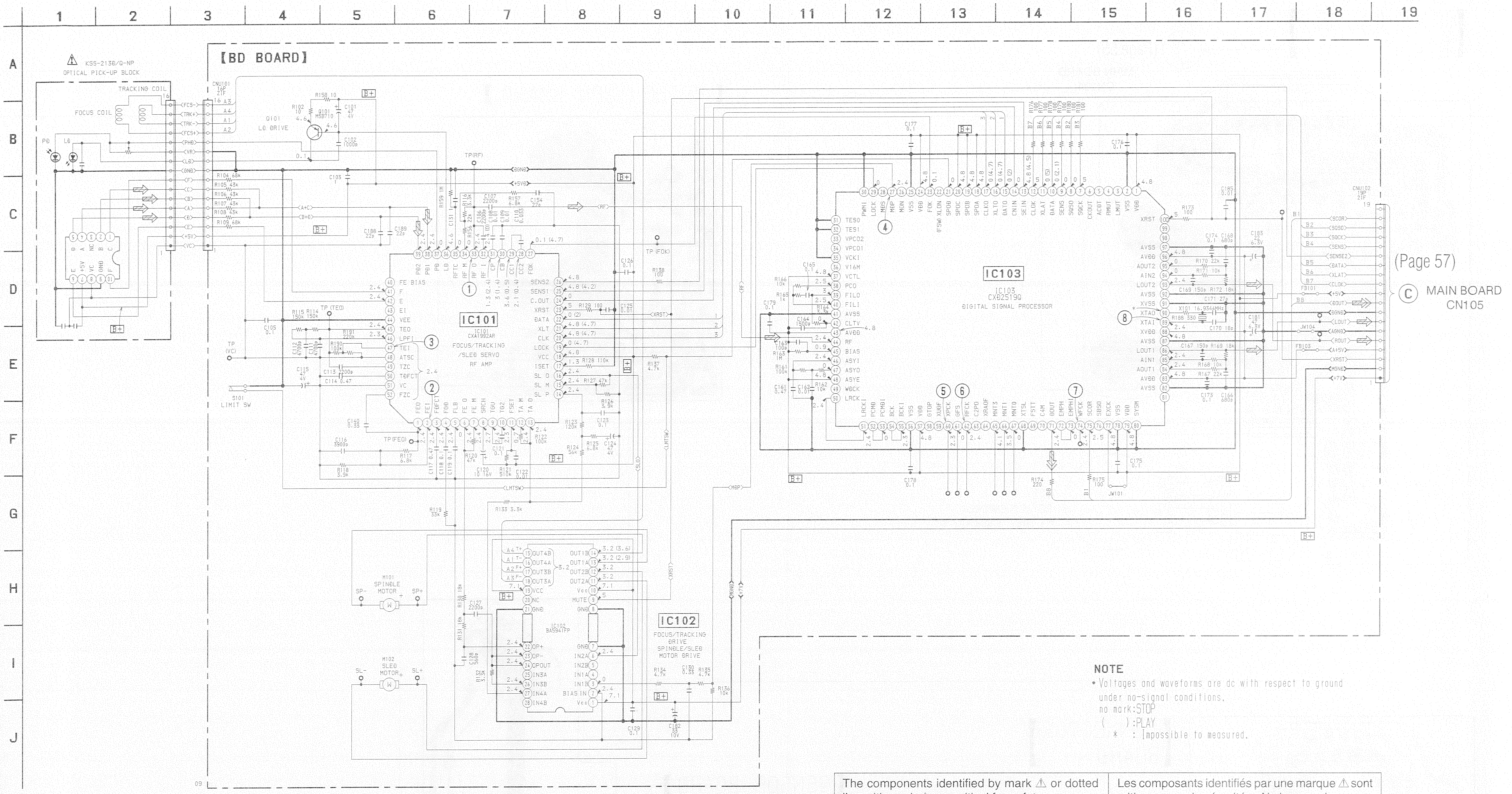
- See page 20 for Circuit Boards Location. • See page 33 for Note on Printed Wiring Board.

- Semiconductor Location

Ref. No.	Location
IC101	C-5
IC102	B-5
IC103	C-6
Q101	C-3


【BD BOARD】(SIDE A)
【BD BOARD】(SIDE B)
A
B
C
1
2
3
4
5
6
7
09
M101 SPINDLE MOTOR
S101 LIMIT SW
M102 SLED MOTOR
TP (VC)
TP (FOK)
TP (RF)
TP (TED)
TP (FED)
TP (GND)
IC101
IC102
IC103
Q101
X101
CN101
CN102
1-663-621-
12, 22, 32
(12, 22, 32)
MAIN BOARD CN105
C
(Page 55)
OPTICAL PICK-UP BLOCK KSS-213D/Q-NP

7-12. SCHEMATIC DIAGRAM – CD Section – • See page 33 for Note on Schematic Diagram. • See page 34 for Waveforms. • See page 79 and 80 for IC Block Diagrams.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
A
B
C
D
E
F
G
H
I
J
[BD BOARD]
KSS-213B/Q-NP
OPTICAL PICK-UP BLOCK
TRACKING COIL
FOCUS COIL
PD
LD
Q101
LD DRIVE
TP (RF)
TP (FOK)
TP (TEO)
TP (VC)
TP (FEO)
IC101
CXA1992AR
FOCUS/TRACKING/SLED SERVO
RF AMP
IC102
BA5941FP
FOCUS/TRACKING DRIVE
SPINDLE/SLED MOTOR DRIVE
IC103
CXD2519Q
DIGITAL SIGNAL PROCESSOR
M101
SPINDLE MOTOR
M102
SLED MOTOR
S101
LIMIT SW
X101 16.934MHz
CN102
(Page 57)
C MAIN BOARD
CN105

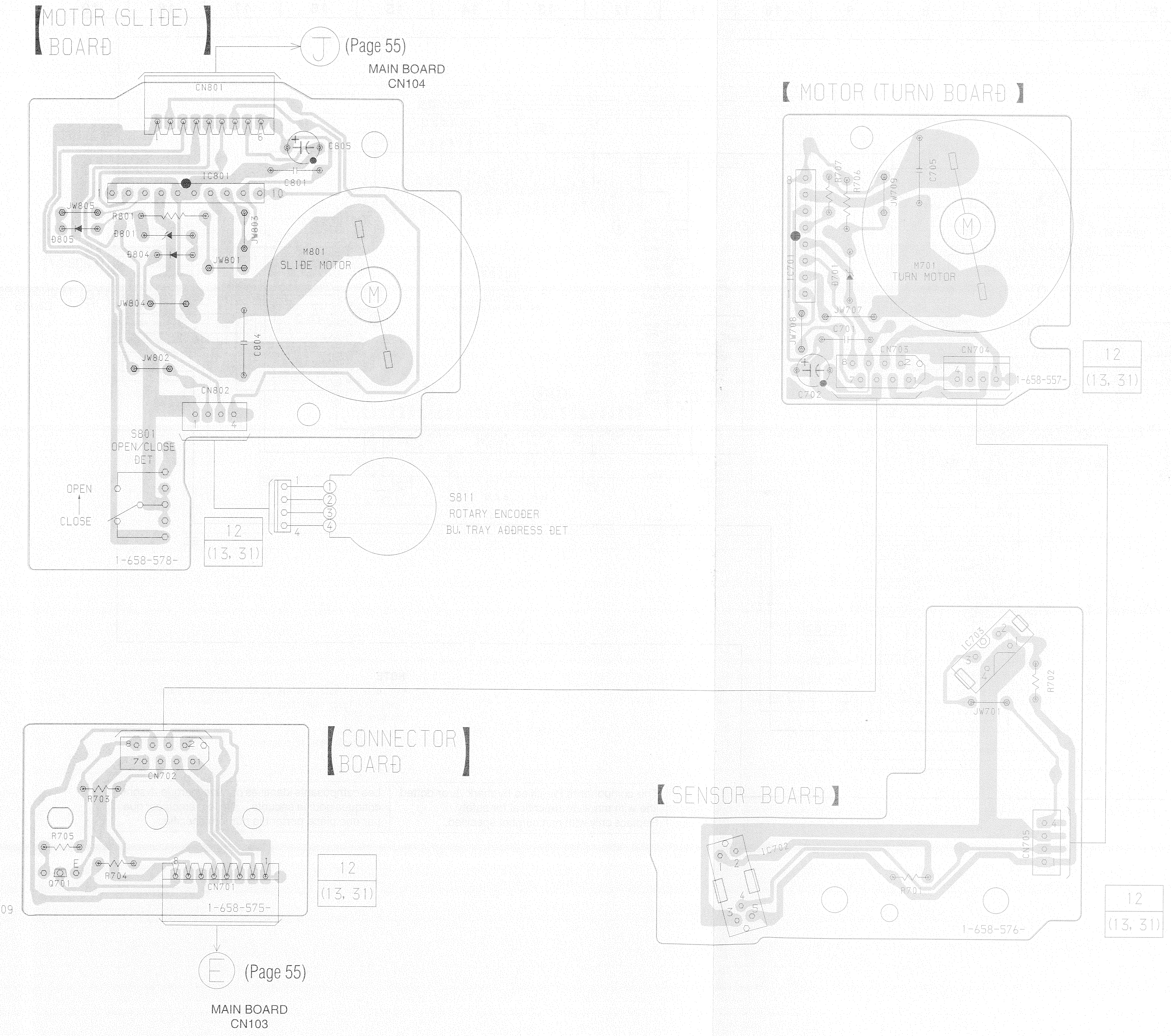
NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:STOP
  ( ):PLAY
  * : Impossible to measured.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

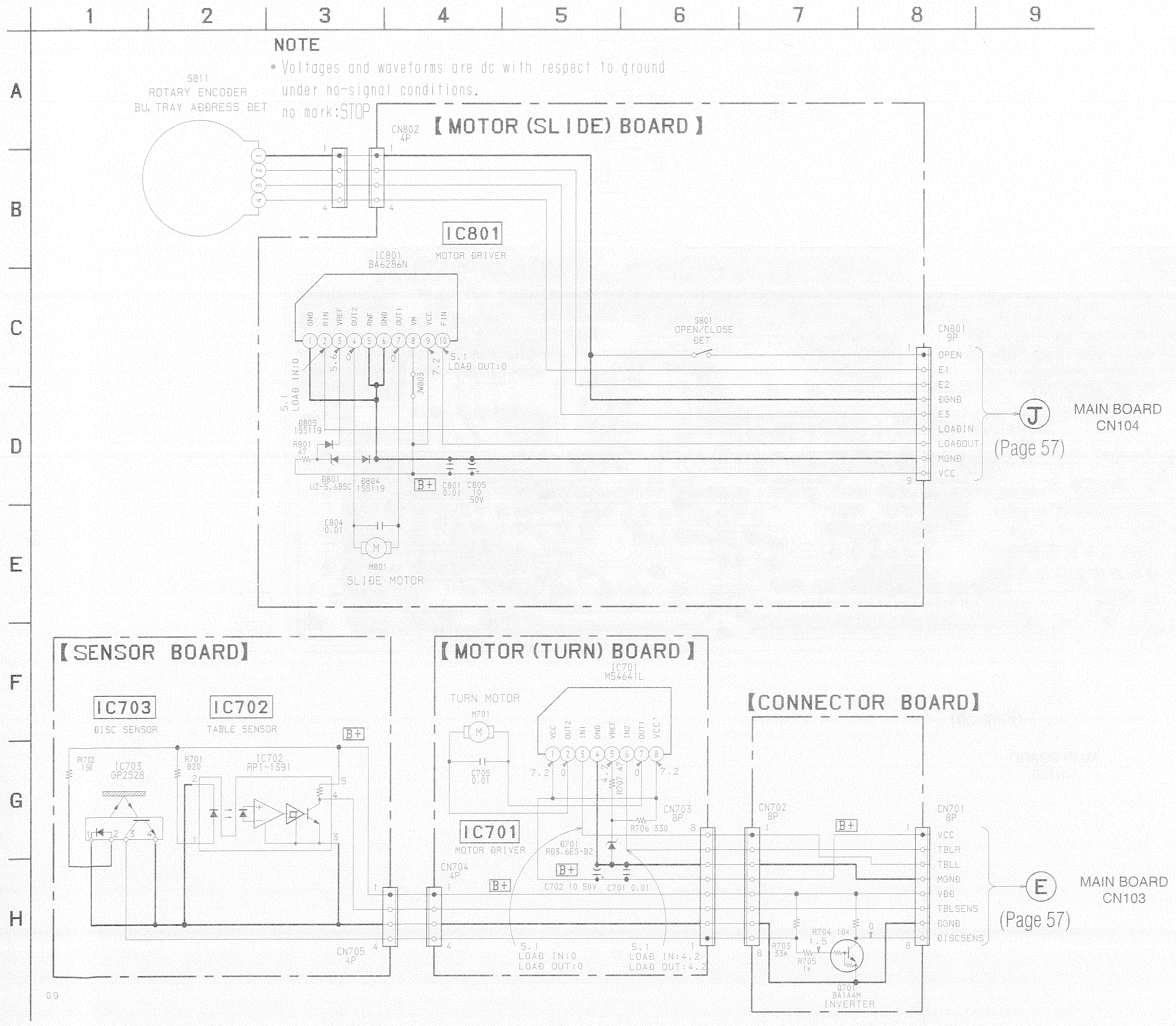
7-13. PRINTED WIRING BOARDS – CD MOTOR Section –

- See page 20 for Circuit Boards Location.
- See page 33 for Note on Printed Wiring Boards.


MOTOR (SLIDE) BOARD
J (Page 55)
MAIN BOARD CN104
CN801
C805
IC801
C801
JW805
R801
D801
D805
D804
JW803
JW801
M801 SLIDE MOTOR
JW804
C804
JW802
CN802
S801 OPEN/CLOSE DET
OPEN
CLOSE
1-658-578-
12 (13, 31)
S811 ROTARY ENCODER BU. TRAY ADDRESS DET
MOTOR (TURN) BOARD
R707
R706
JW709
C705
M701 TURN MOTOR
IC701
D701
JW707
JW708
C701
CN703
CN704
C702
1-658-557-
12 (13, 31)
CONNECTOR BOARD
CN702
R703
R705
R704
Q701
CN701
1-658-575-
12 (13, 31)
09
E (Page 55)
MAIN BOARD CN103
IC703
R702
JW701
SENSOR BOARD
IC702
R701
CN705
1-658-576-
12 (13, 31)

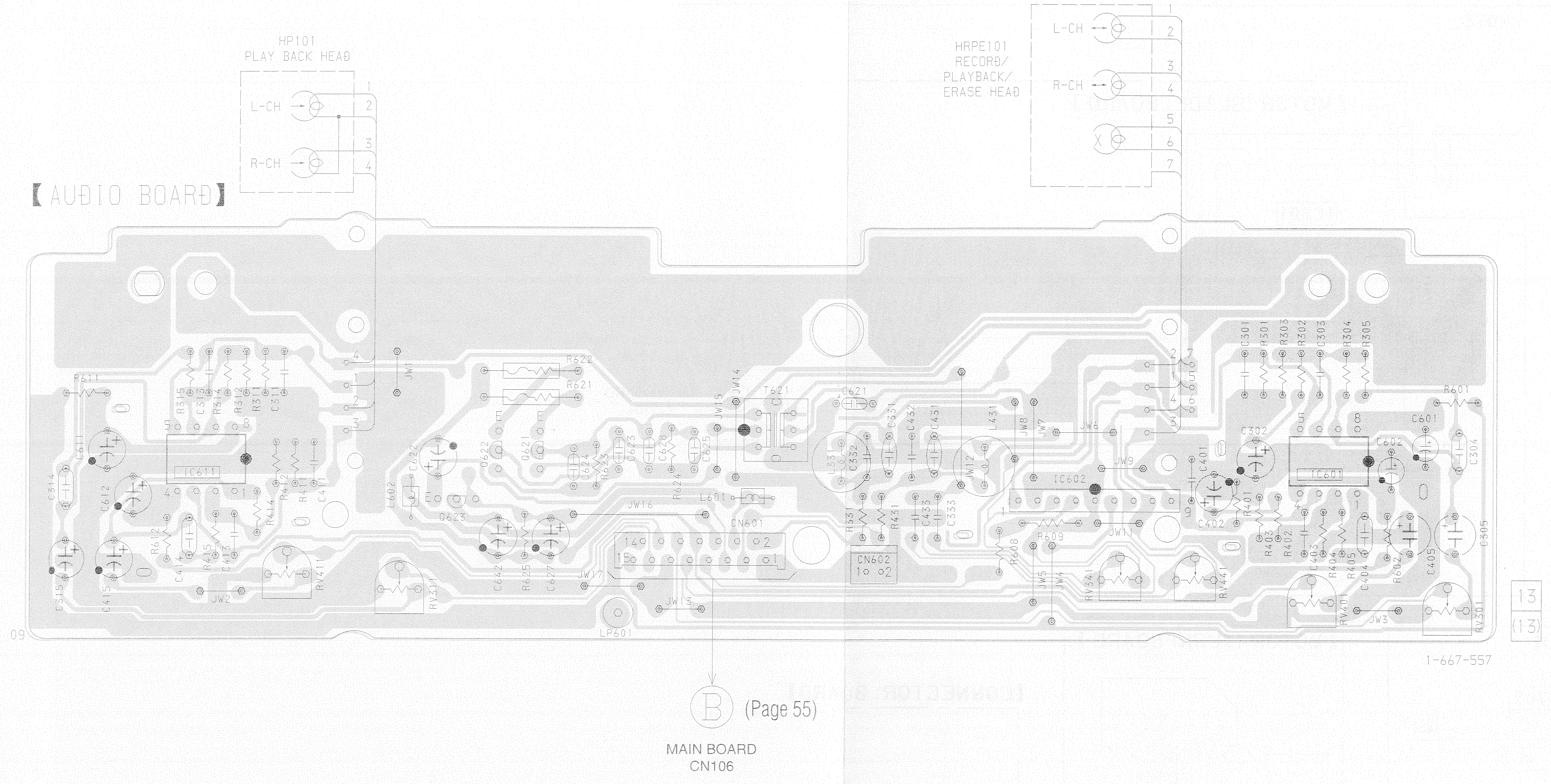
7-14. SCHEMATIC DIAGRAM – CD MOTOR Section –

- See page 33 for Note on Schematic Diagram.
- See page 81 for IC Block Diagrams.


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
NOTE
• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:STOP
S811
ROTARY ENCODER
BU. TRAY ADDRESS DET
CN802
4P
【MOTOR (SLIDE) BOARD】
IC801
MOTOR DRIVER
IC801
BA6286N
GND
RIN
VREF
OUT2
RNF
GND
OUT1
VM
VCC
FIN
5.1
LOAD IN:0
5.6
0
0
7.2
5.1
LOAD OUT:0
JW803
D805
1SS119
R801
47
D801
UZ-5.6BSC
D804
1SS119
B+
C801
0.01
C805
10
50V
C804
0.01
M801
SLIDE MOTOR
S801
OPEN/CLOSE
DET
CN801
9P
OPEN
E1
E2
DGND
E3
LOADIN
LOADOUT
MGND
VCC
J
MAIN BOARD
CN104
(Page 57)
【SENSOR BOARD】
IC703
DISC SENSOR
IC702
TABLE SENSOR
B+
R702
150
IC703
GP2S28
R701
820
IC702
RPI-1391
CN705
4P
【MOTOR (TURN) BOARD】
IC701
M54641L
TURN MOTOR
M701
C705
0.01
VCC
OUT2
IN1
GND
VREF
IN2
OUT1
VCC'
7.2
0
4.7
R707 47
0
7.2
CN703
8P
R706 330
IC701
MOTOR DRIVER
D701
RD3.6ES-B2
CN704
4P
B+
B+
C702 10 50V
C701 0.01
5.1
LOAD IN:0
LOAD OUT:0
5.1
LOAD IN:4.2
LOAD OUT:4.2
【CONNECTOR BOARD】
CN702
8P
B+
CN701
8P
VCC
TBLR
TBLL
MGND
VDD
TBLSENS
DGND
DISCSENS
R704 10k
1.5
0
R703
33k
R705
1k
Q701
BA1A4M
INVERTER
E
MAIN BOARD
CN103
(Page 57)
09

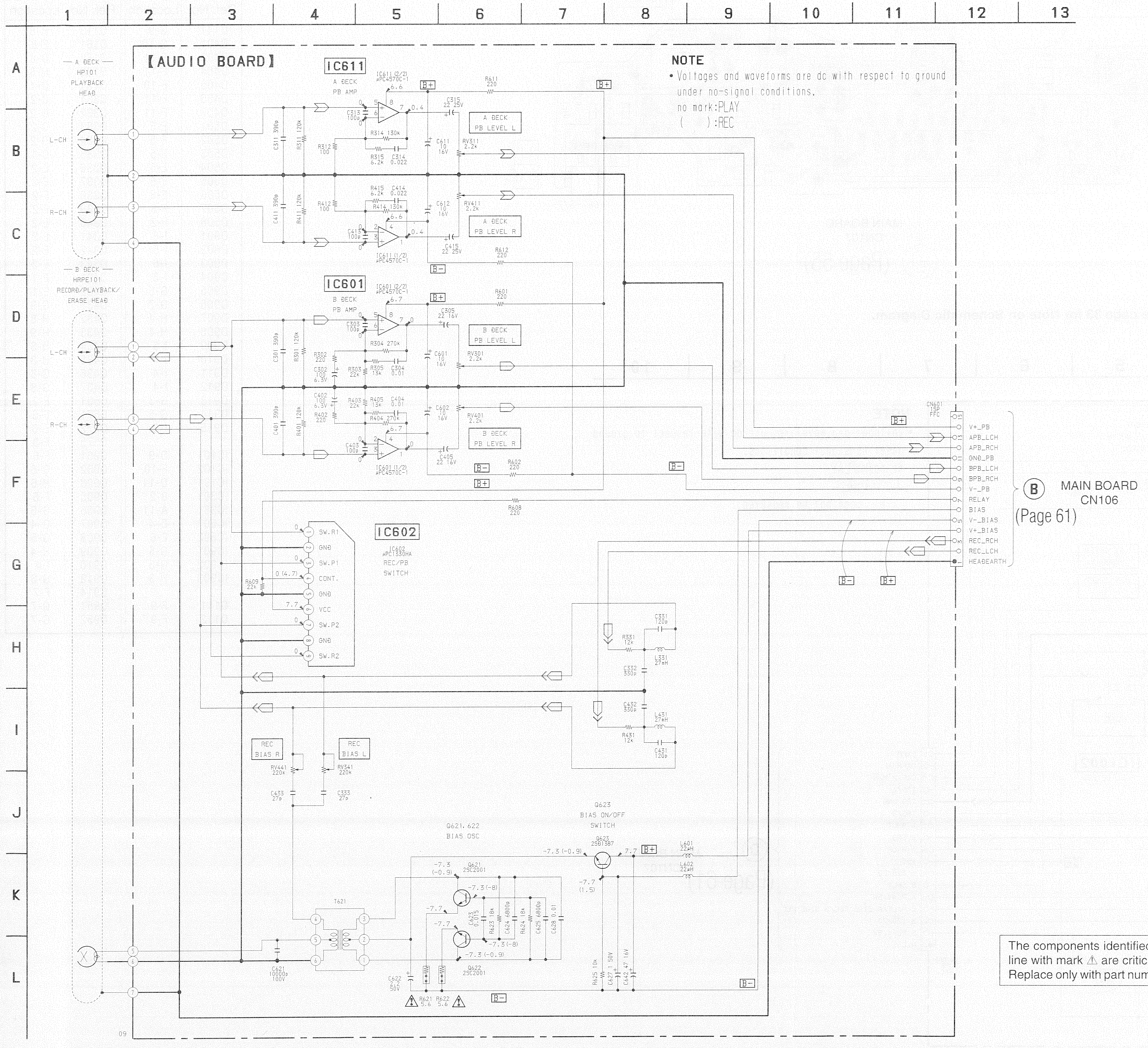
7-15. PRINTED WIRING BOARD – TAPE DECK Section –

• See page 20 for Circuit Boards Location. • See page 33 for Note on Printed Wiring Boards.


【AUDIO BOARD】
HP101
PLAY BACK HEAD
L-CH
R-CH
HRPE101
RECORD/
PLAYBACK/
ERASE HEAD
L-CH
R-CH
X
IC611
IC602
IC601
T621
CN601
CN602
LP601
1-667-557
13
(13)
B
(Page 55)
MAIN BOARD
CN106

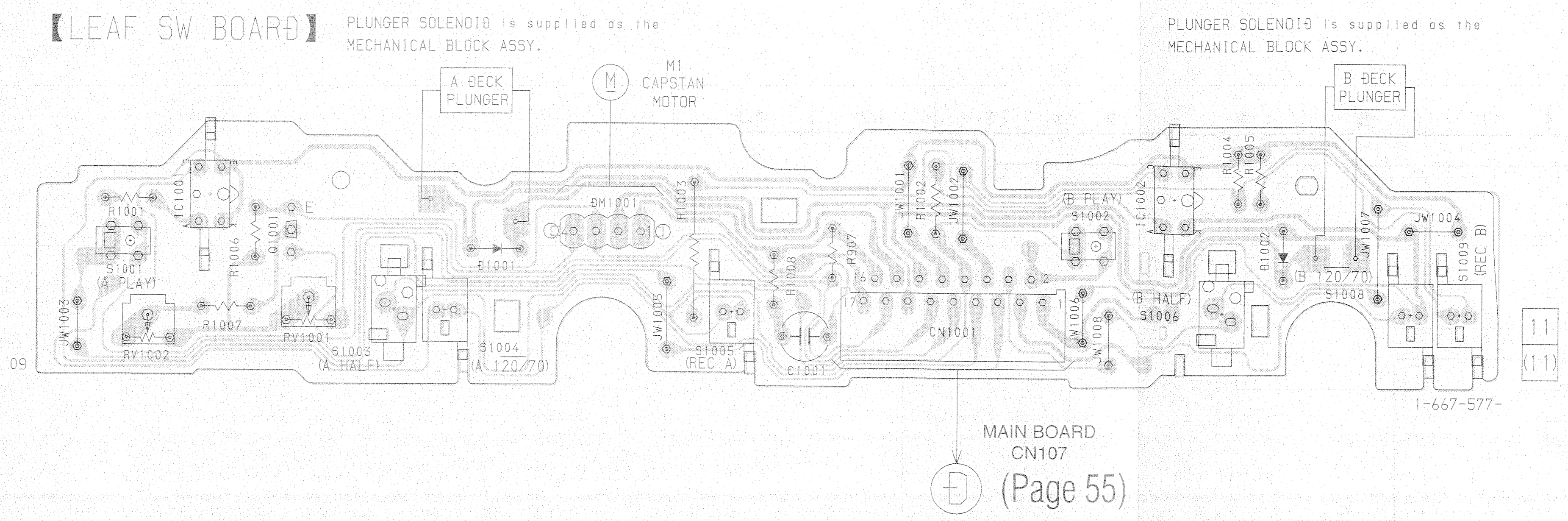
7-16. SCHEMATIC DIAGRAM – TAPE DECK Section –

- See page 33 for Note on Schematic Diagram.
- See page 81 for IC Block Diagram.

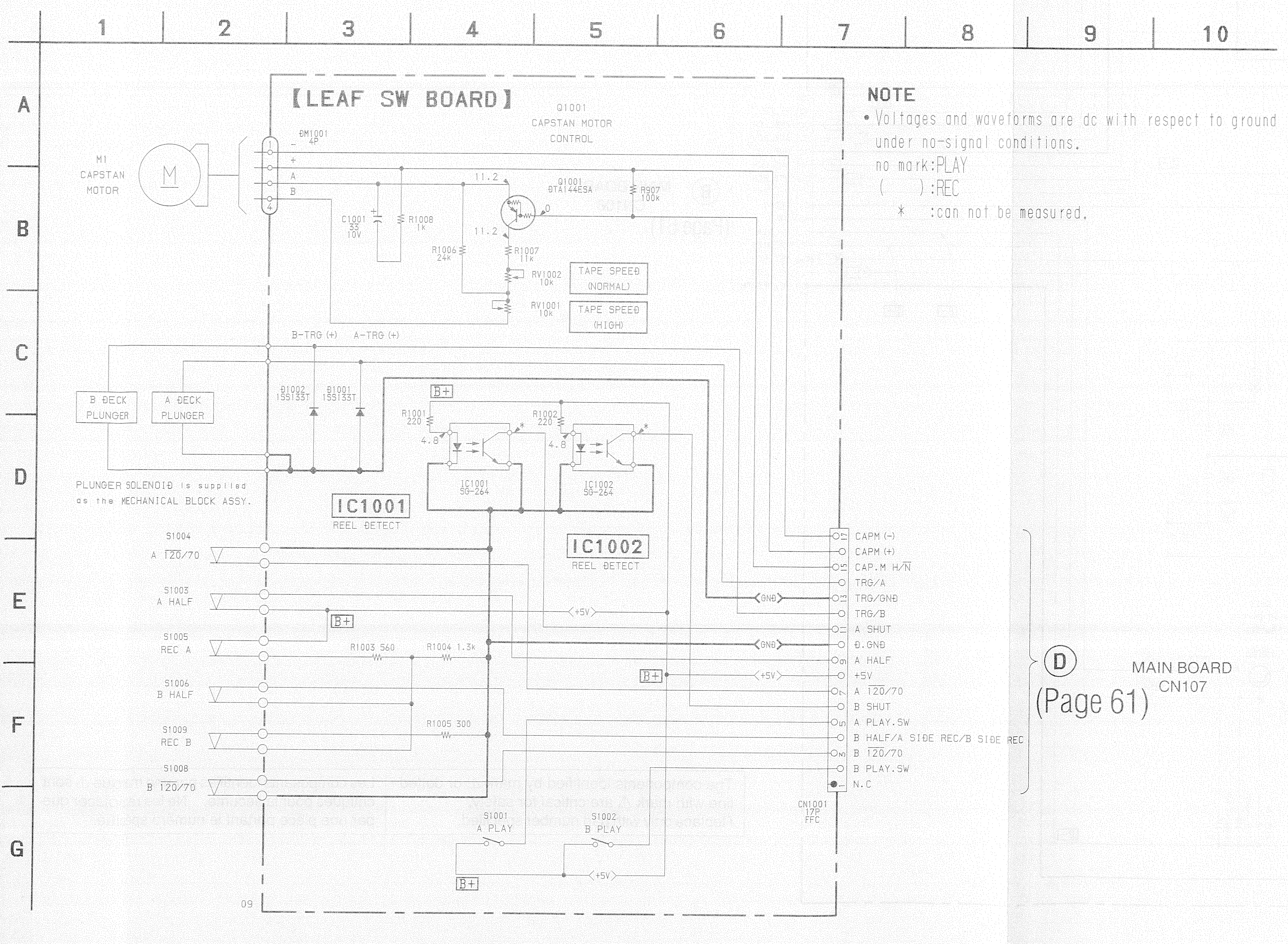

1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
K
L
[AUDIO BOARD]
A DECK
HP101
PLAYBACK
HEAD
L-CH
R-CH
B DECK
HRPE101
RECORD/PLAYBACK/
ERASE HEAD
IC611
A DECK
PB AMP
A DECK
PB LEVEL L
A DECK
PB LEVEL R
IC601
B DECK
PB AMP
B DECK
PB LEVEL L
B DECK
PB LEVEL R
IC602
IC602
μPC1330HA
REC/PB
SWITCH
SW.R1
GND
SW.P1
CONT.
GND
VCC
SW.P2
GND
SW.R2
REC
BIAS R
REC
BIAS L
RV441
220k
RV341
220k
Q621, 622
BIAS OSC
Q623
BIAS ON/OFF
SWITCH
T621
NOTE
• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:PLAY
( ):REC
CN601
15P
FFC
V+_PB
APB_LCH
APB_RCH
GND_PB
BPB_LCH
BPB_RCH
V-_PB
RELAY
BIAS
V-_BIAS
V+_BIAS
REC_RCH
REC_LCH
HEADEARTH
B+
B-
Ⓑ MAIN BOARD
CN106
(Page 61)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-17. PRINTED WIRING BOARD – LEAF SW Section – • See page 20 for Circuit Boards Location. • See page 33 for Note on Printed Wiring Boards.


【LEAF SW BOARD】
PLUNGER SOLENOID is supplied as the MECHANICAL BLOCK ASSY.
A DECK PLUNGER
M1 CAPSTAN MOTOR
PLUNGER SOLENOID is supplied as the MECHANICAL BLOCK ASSY.
B DECK PLUNGER
IC1001
R1001
S1001 (A PLAY)
Q1001
E
R1006
JW1003
RV1002
R1007
RV1001
S1003 (A HALF)
D1001
BM1001
S1004 (A 120/70)
R1003
JW1005
S1005 (REC A)
R1008
C1001
R907
JW1001
R1002
JW1002
CN1001
16
17
2
1
(B PLAY)
S1002
IC1002
JW1006
(B HALF)
S1006
JW1008
R1004
R1005
D1002
(B 120/70)
S1008
JW1007
JW1004
S1009 (REC B)
11
(11)
09
1-667-577-
MAIN BOARD CN107
D (Page 55)

7-18. SCHEMATIC DIAGRAM – LEAF SW Section – • See page 33 for Note on Schematic Diagram.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【LEAF SW BOARD】
Q1001 CAPSTAN MOTOR CONTROL
M1 CAPSTAN MOTOR
BM1001 4P
Q1001 BTA144ESA
R907 100k
C1001 33 10V
R1008 1k
R1006 24k
R1007 11k
11.2
0
RV1002 10k
TAPE SPEED (NORMAL)
RV1001 10k
TAPE SPEED (HIGH)
B-TRG (+)
A-TRG (+)
B DECK PLUNGER
A DECK PLUNGER
D1002 1SS133T
D1001 1SS133T
PLUNGER SOLENOID is supplied as the MECHANICAL BLOCK ASSY.
R1001 220
R1002 220
4.8
IC1001 SG-264
IC1002 SG-264
IC1001 REEL DETECT
IC1002 REEL DETECT
B+
S1004 A 120/70
S1003 A HALF
S1005 REC A
S1006 B HALF
S1009 REC B
S1008 B 120/70
R1003 560
R1004 1.3k
R1005 300
GND
+5V
S1001 A PLAY
S1002 B PLAY
CAPM (−)
CAPM (+)
CAP.M H/N
TRG/A
TRG/GND
TRG/B
A SHUT
D.GND
A HALF
+5V
A 120/70
B SHUT
A PLAY.SW
B HALF/A SIDE REC/B SIDE REC
B 120/70
B PLAY.SW
N.C
17
15
13
11
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7
5
3
1
CN1001 17P FFC
09
D MAIN BOARD CN107 (Page 61)

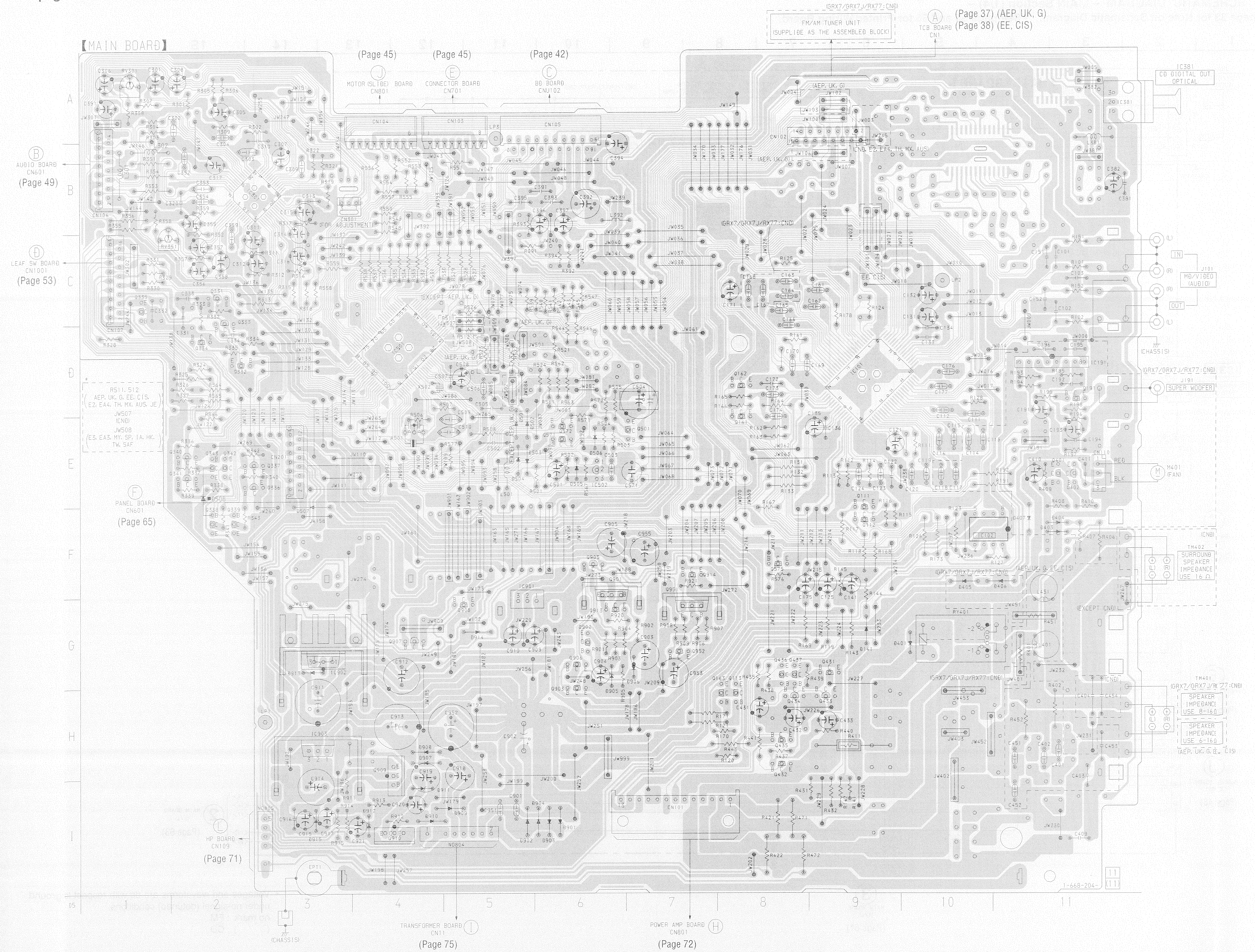
NOTE
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:PLAY
  ( ):REC
  * :can not be measured.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D141	G-9	Q113	H-8
D401	G-10	Q161	E-8
D403	F-11	Q162	D-8
D404	F-11	Q163	H-8
D405	F-10	Q191	D-11
D406	F-11	Q331	C-2
D407	F-11	Q332	D-2
D501	E-5	Q333	C-2
D502	E-5	Q334	D-2
D503	E-5	Q335	C-1
D504	E-5	Q336	E-2
D505	E-6	Q337	E-2
D506	E-6	Q338	F-2
D507	F-3	Q339	F-2
D508	F-2	Q340	E-2
D901	I-6	Q341	E-2
D902	I-5	Q342	E-2
D903	I-6	Q343	E-2
D904	I-6	Q401	E-11
D905	G-6	Q402	E-11
D906	G-7	Q431	G-9
D907	H-4	Q432	H-8
D908	H-4	Q433	H-9
D909	I-5	Q434	H-8
D910	I-4	Q435	H-8
D911	I-4	Q436	G-8
D912	I-4	Q437	G-8
D913	G-3	Q501	E-7
D914	G-5	Q571	E-6
D915	I-3	Q572	E-6
		Q575	F-8
IC101	D-9	Q901	F-6
IC102	F-10	Q902	G-6
IC191	D-11	Q903	H-6
IC301	B-2	Q905	F-6
IC381	A-11	Q906	G-6
IC501	D-4	Q907	G-4
IC502	E-6	Q908	G-5
IC901	G-5	Q909	H-4
IC902	G-3	Q910	I-4
IC903	H-3	Q913	G-6
		Q914	F-7
Q111	F-9	Q951	G-7
Q112	F-9	Q952	G-7

7-19. PRINTED WIRING BOARD – MAIN Section –

• See page 20 for Circuit Boards Location. • See page 33 for Note on Printed Wiring Boards. • See page 57 to 64 for Schematic Diagram.


(GRX7/GRX7J/RX77:CND)
FM/AM TUNER UNIT
(SUPPLIED AS THE ASSEMBLED BLOCK)
A TCB BOARD CN1
(Page 37) (AEP, UK, G)
(Page 38) (EE, CIS)
【MAIN BOARD】
(Page 45)
J MOTOR (SLIDE) BOARD CN801
(Page 45)
E CONNECTOR BOARD CN701
(Page 42)
C BD BOARD CNU102
B AUDIO BOARD CN601
(Page 49)
D LEAF SW BOARD CN1001
(Page 53)
F PANEL BOARD CN601
(Page 65)
L HP BOARD CN109
(Page 71)
(CHASSIS)
TRANSFORMER BOARD I CN11
(Page 75)
POWER AMP BOARD H CN801
(Page 72)
IC381 CD DIGITAL OUT OPTICAL
J101 MD/VIDEO (AUDIO)
IN
OUT
(CHASSIS)
(GRX7/GRX7J/RX77:CND)
J191 SUPER WOOFER
M401 (FAN)
RED
BLK
(CND)
TM402 SURROUND SPEAKER IMPEDANCE USE 16 Ω
TM401 (GRX7/GRX7J/RX77:CND)
SPEAKER IMPEDANCE USE 8-16Ω
SPEAKER IMPEDANCE USE 6-16Ω
(AEP, UK, G, EE, CIS)
R511, 512 (AEP, UK, G, EE, CIS, E2, EA4, TH, MX, AUS, JE)
JW507 (CND)
JW508 (E3, EA3, MY, SP, IA, HK, TW, SAF)
FOR ADJUSTMENT
1-668-204-11
A
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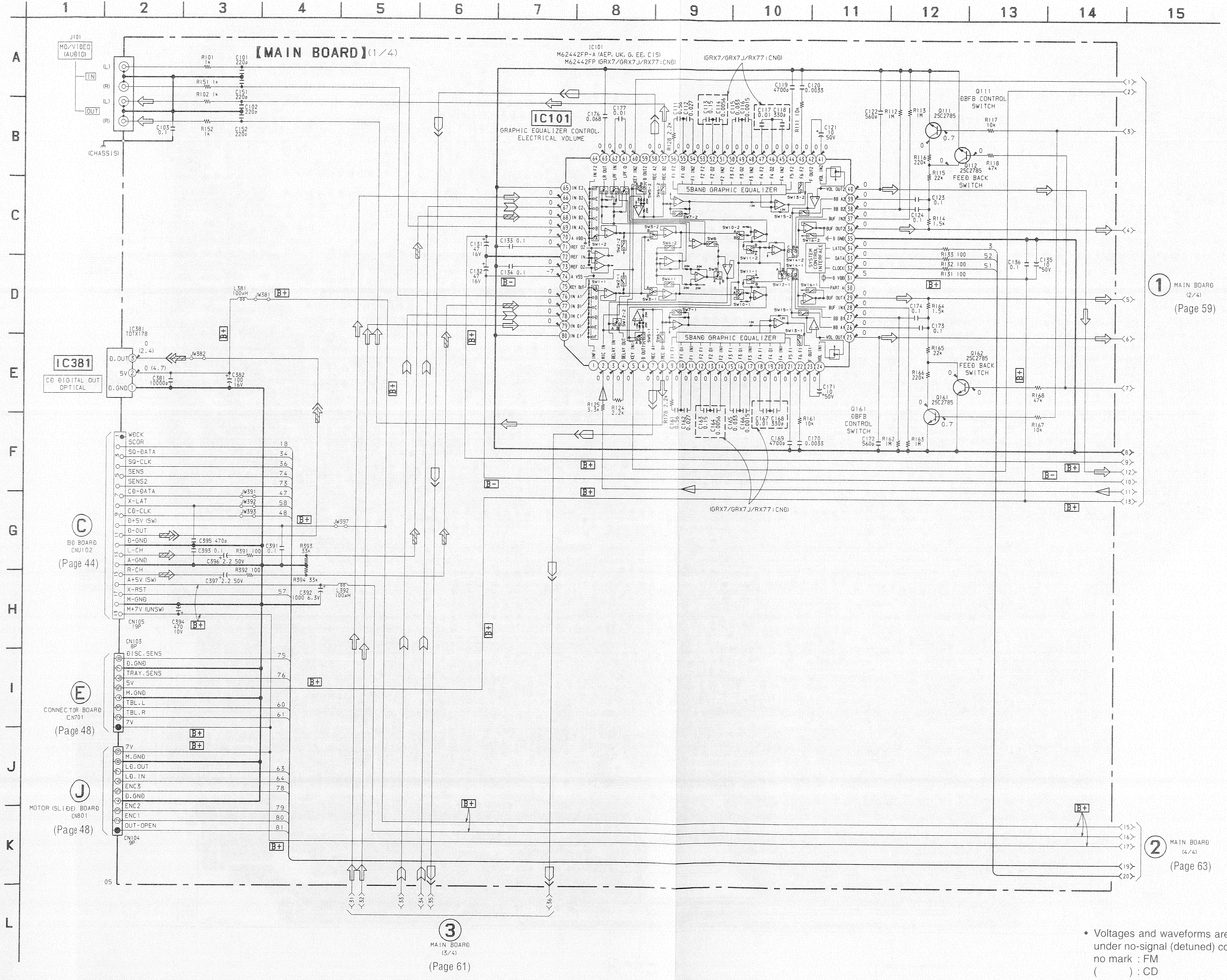
7-20. SCHEMATIC DIAGRAM – MAIN Section (1/4) –

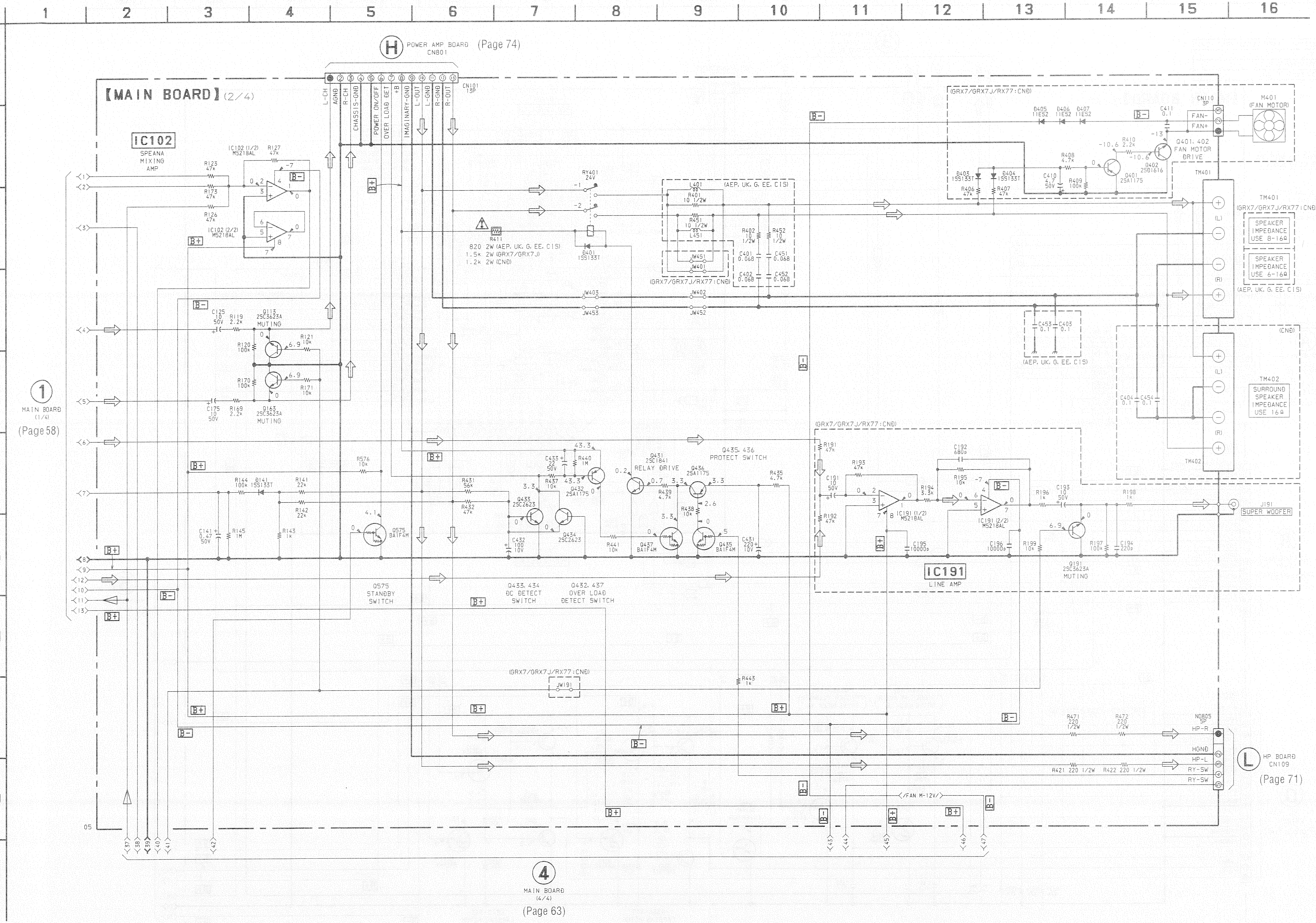
• See page 33 for Note on Schematic Diagram. • See page 55 and 56 for Printed Wiring Board.


[MAIN BOARD] (1/4)
J101 MD/VIDEO (AUDIO)
IN
OUT
(CHASSIS)
IC101
M62442FP-A (AEP, UK, G, EE, CIS)
M62442FP (GRX7/GRX7J/RX77:CND)
GRAPHIC EQUALIZER CONTROL, ELECTRICAL VOLUME
5BAND GRAPHIC EQUALIZER
SYSTEM CONTROL INTERFACE
(GRX7/GRX7J/RX77:CND)
Q111 BBFB CONTROL SWITCH
Q112 2SC2785 FEED BACK SWITCH
Q161 BBFB CONTROL SWITCH
Q162 2SC2785 FEED BACK SWITCH
IC381
CD DIGITAL OUT OPTICAL
IC381 TOTX178
C BD BOARD CN102 (Page 44)
CN105 19P
WDCK
SCOR
SQ-DATA
SQ-CLK
SENS
SENS2
CD-DATA
X-LAT
CD-CLK
D+5V (SW)
D-OUT
D-GND
L-CH
A-GND
R-CH
A+5V (SW)
X-RST
M-GND
M+7V (UNSW)
E CONNECTOR BOARD CN701 (Page 48)
CN103 8P
DISC.SENS
D.GND
TRAY.SENS
5V
M.GND
TBL.L
TBL.R
7V
J MOTOR (SLIDE) BOARD CN801 (Page 48)
CN104 9P
7V
M.GND
LD.OUT
LD.IN
ENC3
D.GND
ENC2
ENC1
OUT-OPEN
1 MAIN BOARD (2/4) (Page 59)
2 MAIN BOARD (4/4) (Page 63)
3 MAIN BOARD (3/4) (Page 61)

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM
( ) : CD

7-21. SCHEMATIC DIAGRAM – MAIN Section (2/4) –

• See page 33 for Note on Schematic Diagram. • See page 55 and 56 for Printed Wiring Board.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J
K
H POWER AMP BOARD CN801 (Page 74)
[MAIN BOARD] (2/4)
CN101 13P
L-CH
AGND
R-CH
CHASSIS-GND
POWER ON/OFF
OVER LOAD DET
+B
IMAGINARY-GND
L-OUT
L-GND
R-GND
R-OUT
IC102 SPEANA MIXING AMP
IC102 (1/2) M5218AL
IC102 (2/2) M5218AL
R123 47k
R173 47k
R126 47k
R127 47k
Q113 2SC3623A MUTING
Q163 2SC3623A MUTING
C125 10 50V
R119 2.2k
R120 100k
R121 10k
R170 100k
R171 10k
C175 10 50V
R169 2.2k
① MAIN BOARD (1/4) (Page 58)
RY401 24V
R411 820 2W (AEP, UK, G, EE, CIS) 1.5k 2W (GRX7/GRX7J) 1.2k 2W (CND)
D401 1SS133T
L401
R401 10 1/2W
R451 10 1/2W
L451
W451
W401
(AEP, UK, G, EE, CIS)
(GRX7/GRX7J/RX77:CND)
R402 10 1/2W
R452 10 1/2W
C401 0.068
C451 0.068
C402 0.068
C452 0.068
JW403
JW453
JW402
JW452
C453 0.1
C403 0.1
(AEP, UK, G, EE, CIS)
D405 11ES2
D406 11ES2
D407 11ES2
C411 0.1
CN110 3P
FAN-
FAN+
M401 (FAN MOTOR)
R410 2.2k
Q401, 402 FAN MOTOR DRIVE
Q402 2SD1616
Q401 2SA1175
R408 4.7k
D403 1SS133T
D404 1SS133T
R406 47k
R407 47k
C410 4.7 50V
R409 100k
TM401
TM401 (GRX7/GRX7J/RX77:CND)
SPEAKER IMPEDANCE USE 8-16Ω
SPEAKER IMPEDANCE USE 6-16Ω
(AEP, UK, G, EE, CIS)
(CND)
TM402 SURROUND SPEAKER IMPEDANCE USE 16Ω
C404 0.1
C454 0.1
TM402
R576 10k
C433 22 50V
R440 1M
R437 10k
Q432 2SA1175
Q431 2SC1841 RELAY DRIVE
Q436 2SA1175
Q435, 436 PROTECT SWITCH
R435 4.7k
R439 4.7k
R438 10k
R431 56k
R432 47k
Q433 2SC2623
Q434 2SC2623
C432 100 10V
R441 10k
Q437 BA1F4M
Q435 BA1F4M
C431 220 10V
R144 100k
D141 1SS133T
R141 22k
R142 22k
C141 0.47 50V
R145 1M
R143 1k
Q575 BA1F4M
Q575 STANDBY SWITCH
Q433, 434 DC DETECT SWITCH
Q432, 437 OVER LOAD DETECT SWITCH
(GRX7/GRX7J/RX77:CND)
R191 47k
R193 47k
C191 10 50V
R192 47k
R194 3.3k
IC191 (1/2) M5218AL
IC191 (2/2) M5218AL
C192 680p
R195 10k
R196 1k
C193 10 50V
R198 1k
J191 SUPER WOOFER
C195 10000p
C196 10000p
R199 10k
R197 100k
C194 220p
Q191 2SC3623A MUTING
IC191 LINE AMP
(GRX7/GRX7J/RX77:CND)
JW191
R443 1k
R471 220 1/2W
R472 220 1/2W
R421 220 1/2W
R422 220 1/2W
N0805 5P
HP-R
HGND
HP-L
RY-SW
RY-SW
L HP BOARD CN109 (Page 71)
(FAN M-12V)
④ MAIN BOARD (4/4) (Page 63)
B+
B-

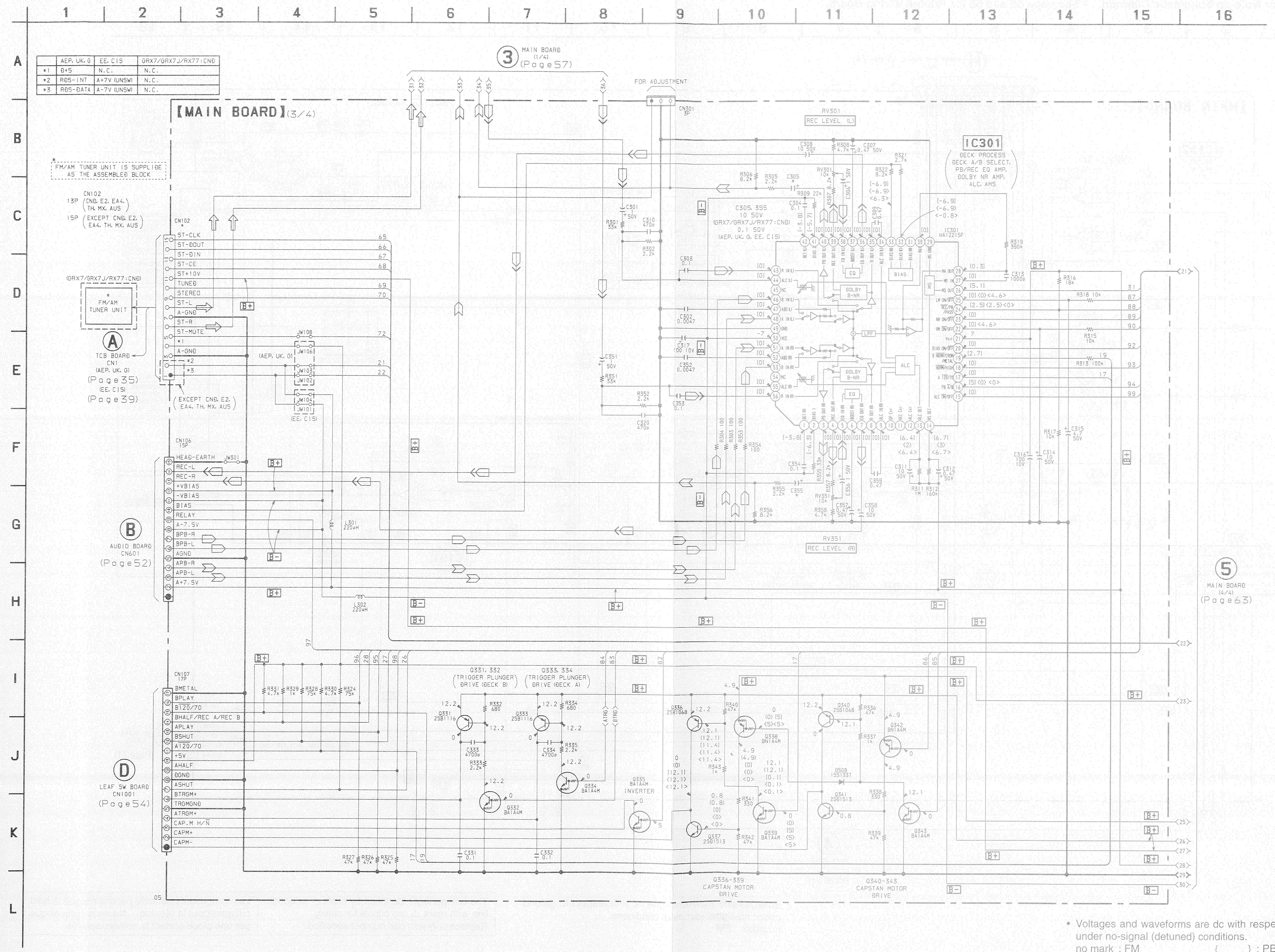
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-22. SCHEMATIC DIAGRAM – MAIN Section (3/4) –

• See page 33 for Note on Schematic Diagram. • See page 55 and 56 for Printed Wiring Board.

	AEP, UK, G	EE, CIS	GRX7/GRX7J/RX77:CND
*1	D+5	N.C.	N.C.
*2	RDS-INT	A+7V (UNSW)	N.C.
*3	RDS-DATA	A-7V (UNSW)	N.C.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A
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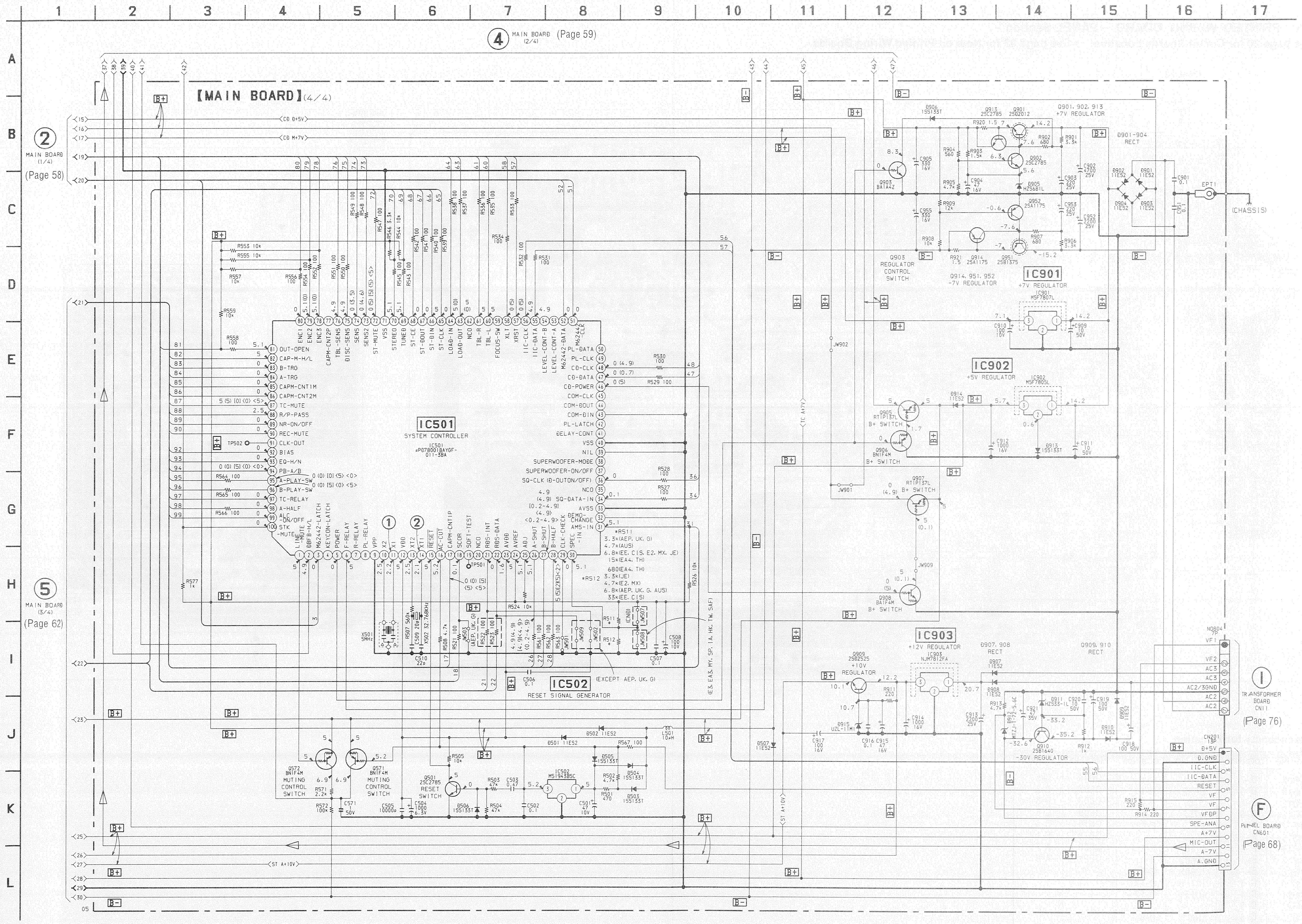
C
D
E
F
G
H
I
J
K
L
【MAIN BOARD】(3/4)
③ MAIN BOARD (1/4) (Page 57)
FOR ADJUSTMENT
CN301 3P
RV301 REC LEVEL (L)
IC301
DECK PROCESS
DECK A/B SELECT,
PB/REC EQ AMP,
DOLBY NR AMP,
ALC, AMS
IC301 HA12215F
* FM/AM TUNER UNIT IS SUPPLIED AS THE ASSEMBLED BLOCK
CN102 13P (CND, E2, EA4, TH, MX, AUS)
15P (EXCEPT CND, E2, EA4, TH, MX, AUS)
(GRX7/GRX7J/RX77:CND)
* FM/AM TUNER UNIT
Ⓐ TCB BOARD CN1 (AEP, UK, G) (Page 35) (EE, CIS) (Page 39)
ST-CLK
ST-DOUT
ST-DIN
ST-CE
ST+10V
TUNED
STEREO
ST-L
A-GND
ST-R
ST-MUTE
*1
A-GND
*2
*3
(AEP, UK, G)
(EXCEPT CND, E2, EA4, TH, MX, AUS)
(EE, CIS)
JW108
JW106
JW103
JW102
JW104
JW101
CN106 15P
HEAD-EARTH
REC-L
REC-R
+VBIAS
-VBIAS
BIAS
RELAY
A-7.5V
BPB-R
BPB-L
AGND
APB-R
APB-L
A+7.5V
Ⓑ AUDIO BOARD CN601 (Page 52)
L301 220μH
L302 220μH
CN107 17P
BMETAL
BPLAY
B120/70
BHALF/REC A/REC B
APLAY
BSHUT
A120/70
+5V
AHALF
DGND
ASHUT
BTRGM+
TRGMGND
ATRGM+
CAP.M H/N
CAPM+
CAPM-
Ⓓ LEAF SW BOARD CN1001 (Page 54)
Q331, 332 (TRIGGER PLUNGER DRIVE (DECK B))
Q333, 334 (TRIGGER PLUNGER DRIVE (DECK A))
Q335 BA1A4M INVERTER
Q336-339 CAPSTAN MOTOR DRIVE
Q340-343 CAPSTAN MOTOR DRIVE
RV351 REC LEVEL (R)
DOLBY B-NR
EQ
BIAS
LPF
ALC
B+
B-
⑤ MAIN BOARD (4/4) (Page 63)

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.

no mark : FM
( ) : CD
{ } : PB (DECK A)
[ ] : PB (DECK B)
< > : REC

7-23. SCHEMATIC DIAGRAM – MAIN Section (4/4) –

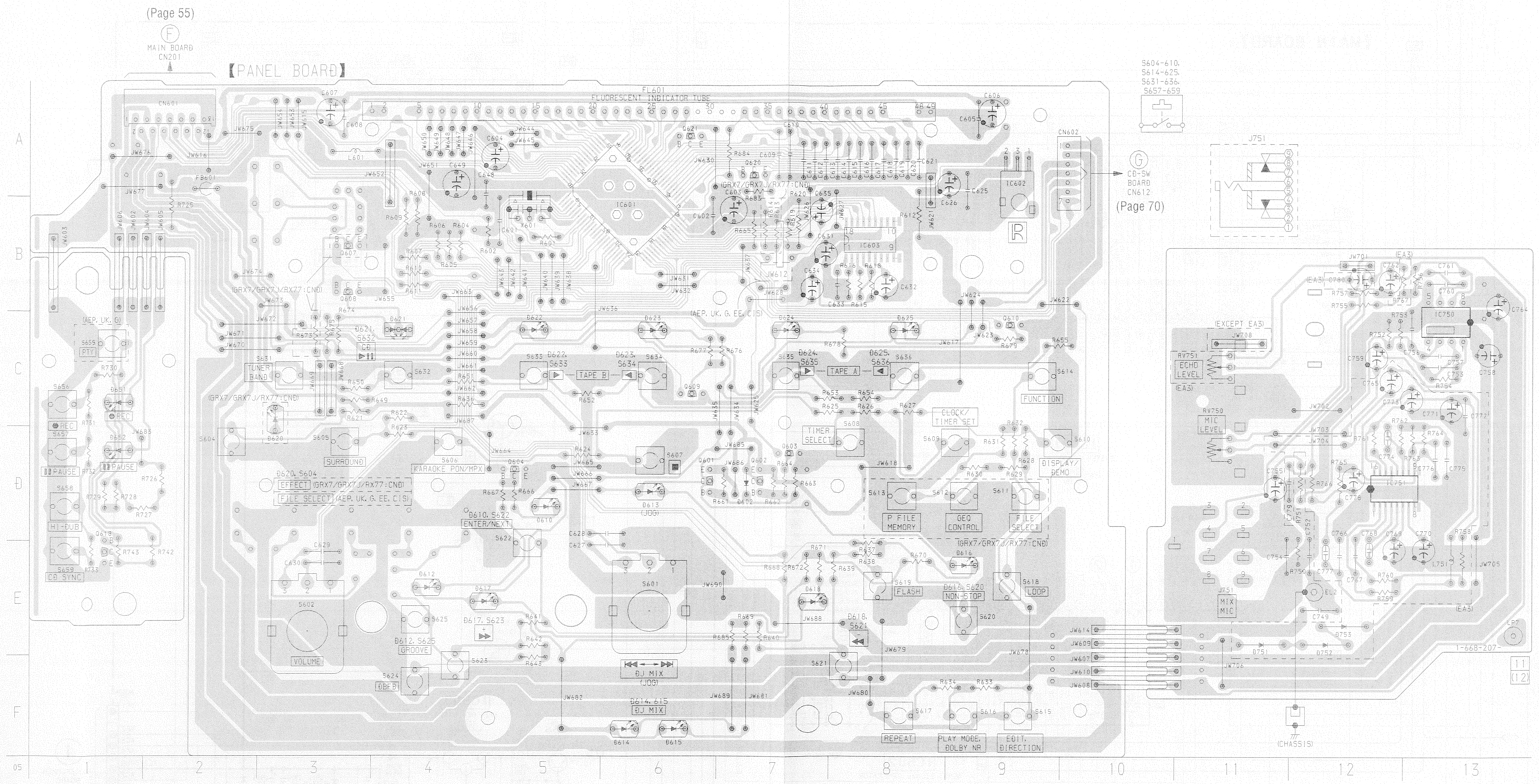
• See page 34 for Waveforms. • See page 33 for Note on Schematic Diagram. • See page 55 and 56 for Printed Wiring Board.


【MAIN BOARD】(4/4)
④ MAIN BOARD (2/4) (Page 59)
② MAIN BOARD (1/4) (Page 58)
⑤ MAIN BOARD (3/4) (Page 62)
Ⓘ TRANSFORMER BOARD CN11 (Page 76)
Ⓕ PANEL BOARD CN601 (Page 68)
IC501 SYSTEM CONTROLLER
IC502 RESET SIGNAL GENERATOR
IC901 +7V REGULATOR
IC902 +5V REGULATOR
IC903 +12V REGULATOR
Q901, 902, 913 +7V REGULATOR
Q914, 951, 952 -7V REGULATOR
Q903 REGULATOR CONTROL SWITCH
Q905 B+ SWITCH
Q906 B+ SWITCH
Q907 B+ SWITCH
Q908 B+ SWITCH
Q909 +10V REGULATOR
Q910 -30V REGULATOR
Q501 RESET SWITCH
Q571 MUTING CONTROL SWITCH
Q572 MUTING CONTROL SWITCH
D901-904 RECT
D907, 908 RECT
D909, 910 RECT
EPT1
(CHASSIS)
X501 5MHz
X502 32.768kHz
(EXCEPT AEP, UK, G)
CD B+5V
CD M+7V
ST A+10V
TC A+7V
B+
B-
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
A B C D E F G H I J K L

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM { } : PB (DECK A)
( ) : CD [ ] : PB (DECK B)
< > : REC

7-24. PRINTED WIRING BOARD – PANEL Section –

• See page 20 for Circuit Boards Location. • See page 33 for Note on Printed Wiring Boards.


(Page 55)
F
MAIN BOARD CN201
【PANEL BOARD】
FL601 FLUORESCENT INDICATOR TUBE
IC601
IC602
IC603
IC750
IC751
CN601
CN602
G
CD-SW BOARD CN612
(Page 70)
S604-610, S614-625, S631-636, S657-659
J751
(AEP, UK, G)
PTY
REC
PAUSE
HI-DUB
CD SYNC
TUNER BAND
SURROUND
KARAOKE PON/MPX
EFFECT (GRX7/GRX7J/RX77:CND)
FILE SELECT (AEP, UK, G, EE, CIS)
ENTER/NEXT
TAPE B
TAPE A
TIMER SELECT
CLOCK/TIMER SET
FUNCTION
DISPLAY/DEMO
P FILE MEMORY
GEQ CONTROL
FILE SELECT
(GRX7/GRX7J/RX77:CND)
FLASH
NON-STOP
LOOP
VOLUME
GROOVE
DBFB
DJ MIX (JOG)
DJ MIX
REPEAT
PLAY MODE, DOLBY NR
EDIT, DIRECTION
(EXCEPT EA3)
ECHO LEVEL
MIC LEVEL
MIX MIC
(EA3)
(CHASSIS)
1-668-207-
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(12)
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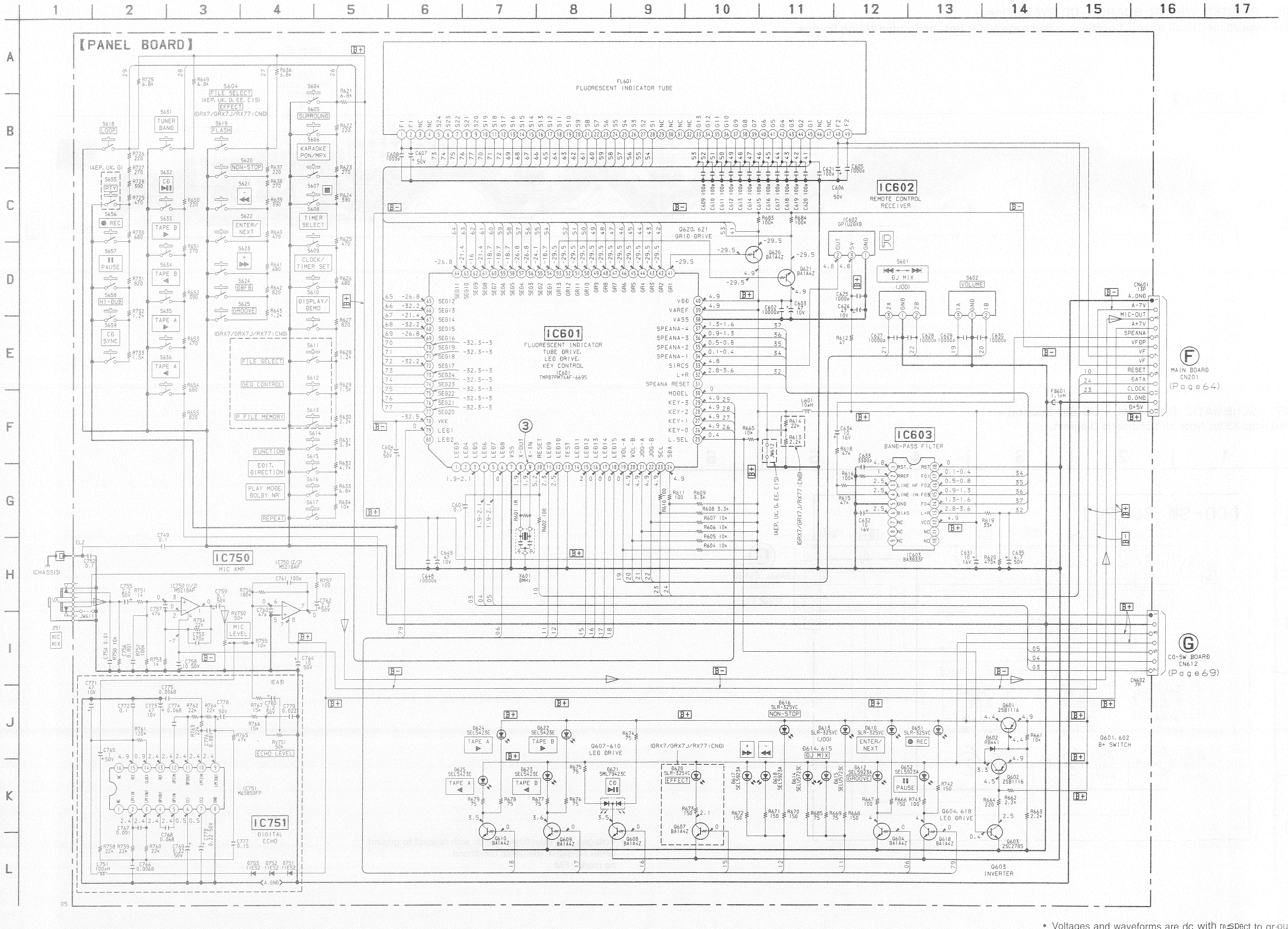
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D602	D-7	D651	C-1	Q604	D-5
D610	D-5	D652	D-1	Q607	B-3
D612	E-4	D751	E-11	Q608	B-3
D613	D-6	D752	E-12	Q609	C-6
D614	F-6	D753	E-12	Q610	C-9
D615	F-6			Q618	E-1
D616	E-9	IC601	B-6	Q620	A-7
D617	E-4	IC602	A-9	Q621	A-6
D618	E-7	IC603	B-8		
D620	C-3	IC750	C-13		
D621	C-4	IC751	D-12		
D622	C-5				
D623	C-6	Q601	D-6		
D624	C-7	Q602	D-7		
D625	C-8	Q603	D-7		

7-25. SCHEMATIC DIAGRAM – PANEL Section –

- See page 34 for Waveform. • See page 81 for IC Block Diagrams.
- See page 33 for Note on Schematic Diagram.



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H
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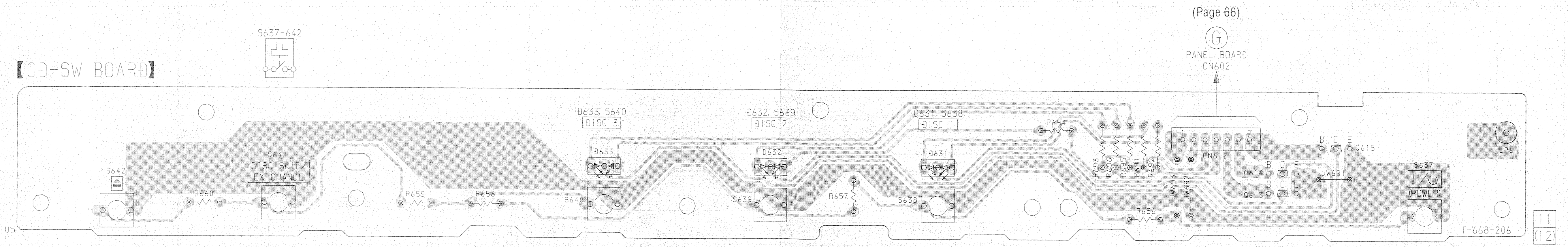
J
K
L
[PANEL BOARD]
FL601
FLUORESCENT INDICATOR TUBE
IC601
FLUORESCENT INDICATOR TUBE DRIVE, LED DRIVE, KEY CONTROL
IC601 TMP87PM74AF-6695
IC602
REMOTE CONTROL RECEIVER
IC602 GP1U28XB
IC603
BAND-PASS FILTER
IC603 BA3835F
IC750
MIC AMP
IC750 (1/2) M5218AP
IC750 (2/2) M5218AP
IC751
DIGITAL ECHO
IC751 M65850FP
Q620, 621 GRID DRIVE
Q607-610 LED DRIVE
Q614, 615 DJ MIX
Q604, 618 LED DRIVE
Q601, 602 B+ SWITCH
Q603 INVERTER
X601 8MHz
S618 LOOP
S655 PTY
S656 ● REC
S657 II PAUSE
S658 HI-DUB
S659 CD SYNC
S631 TUNER BAND
S632 CD ▶II
S633 TAPE B ▶
S634 TAPE B ◀
S635 TAPE A ▶
S636 TAPE A ◀
S604 FILE SELECT (AEP, UK, G, EE, CIS)
EFFECT (GRX7/GRX7J/RX77:CND)
S619 FLASH
S620 NON-STOP
S621 ◀◀
S622 ENTER/NEXT
S623 ▶▶
S624 DBFB
S625 GROOVE
S605 SURROUND
S606 KARAOKE PON/MPX
S607 ■
S608 TIMER SELECT
S609 CLOCK/TIMER SET
S610 DISPLAY/DEMO
(GRX7/GRX7J/RX77:CND)
FILE SELECT
GEQ CONTROL
P.FILE MEMORY
FUNCTION
EDIT, DIRECTION
PLAY MODE, BOLBY NR
REPEAT
S601 DJ MIX (JOG)
S602 VOLUME
CN601 13P
A.GND
A-7V
MIC-OUT
A+7V
SPEANA
VFDP
VF
VF
RESET
DATA
CLOCK
D.GND
D+5V
F
MAIN BOARD CN201 (Page 64)
G
CD-SW BOARD CN612 (Page 69)
CN602 7P
J751 MIC MIX
MIC LEVEL
ECHO LEVEL
(CHASSIS)
(AEP, UK, G)
(AEP, UK, G, EE, CIS)
(GRX7/GRX7J/RX77:CND)
D624 SEL5423E TAPE A ▶
D622 SEL5423E TAPE B ▶
D625 SEL5423E TAPE A ◀
D623 SEL5423E TAPE B ◀
D621 SML79423C CD ▶II
D620 SLR-325VC EFFECT
D616 SLR-325VC NON-STOP
D613 SLR-325VC (JOG)
D610 SLR-325VC ENTER/NEXT
D651 SLR-325VC ● REC
D612 SEL5923A GROOVE
D652 SEL5923A II PAUSE
B+
B-

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

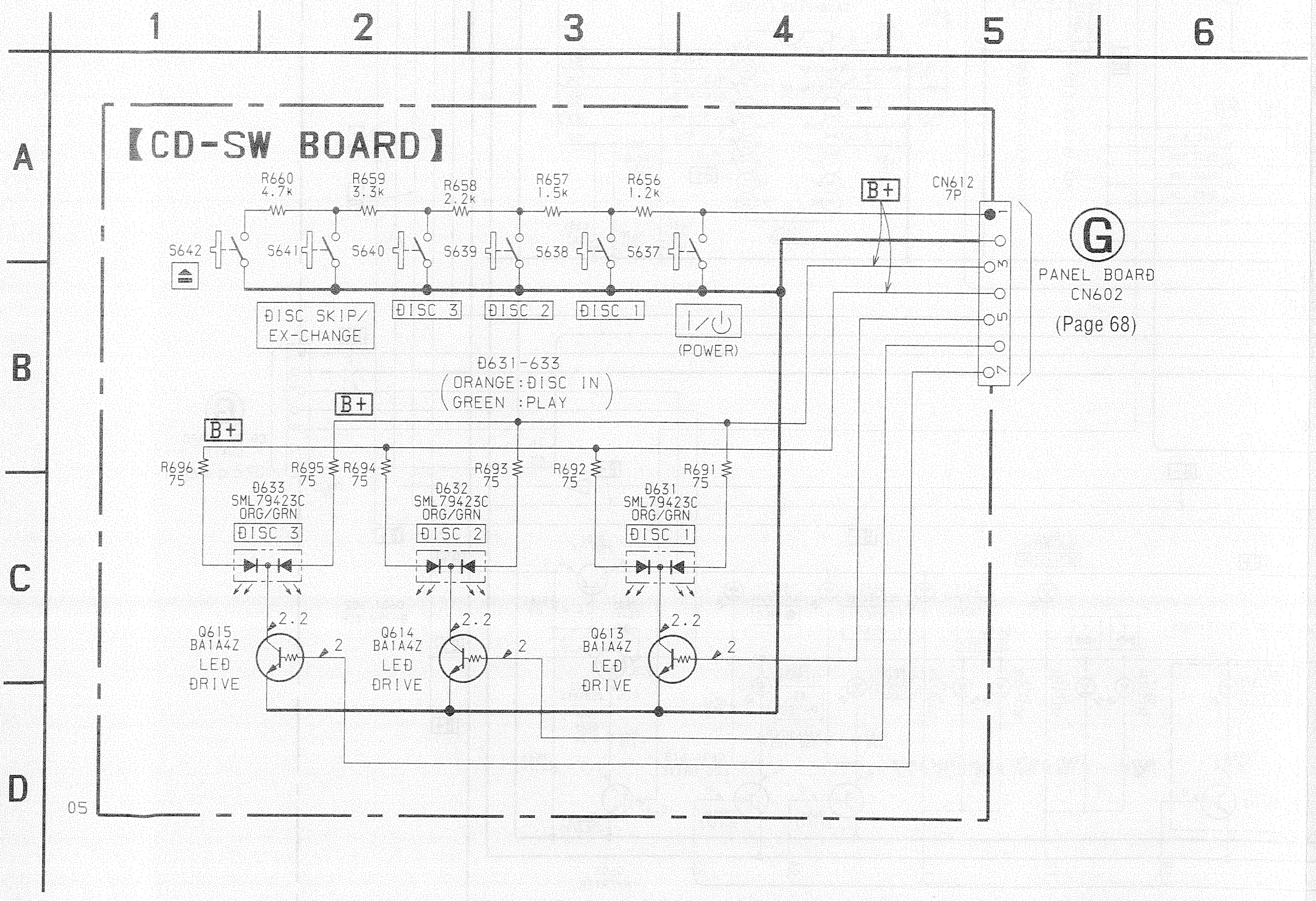
7-26. PRINTED WIRING BOARD – CD-SW Section –

- See page 20 for Circuit Boards Location. • See page 33 for Note on Printed Wiring Boards.


S637-642
【CD-SW BOARD】
(Page 66)
G
PANEL BOARD
CN602
D633, S640
DISC 3
D632, S639
DISC 2
D631, S638
DISC 1
S641
DISC SKIP/
EX-CHANGE
S642
R660
R659
R658
S640
D633
D632
S639
R657
D631
S638
R654
R693
R694
R695
R691
R692
CN612
JW693
JW692
R656
Q614
Q613
Q615
B C E
JW691
S637
I/⏻
(POWER)
LP6
05
1-668-206-
11
(12)

7-27. SCHEMATIC DIAGRAM – CD-SW Section –

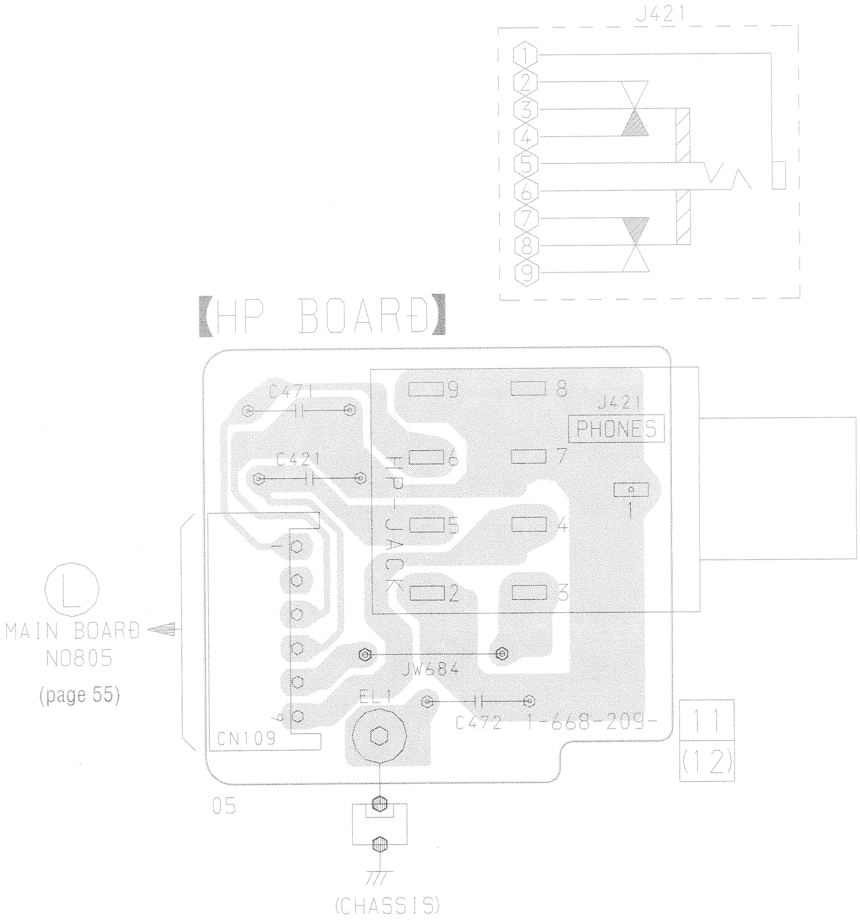
- See page 33 for Note on Schematic Diagram.


1
2
3
4
5
6
A
B
C
D
【CD-SW BOARD】
R660 4.7k
R659 3.3k
R658 2.2k
R657 1.5k
R656 1.2k
B+
CN612 7P
S642
S641
S640
S639
S638
S637
DISC SKIP/
EX-CHANGE
DISC 3
DISC 2
DISC 1
I/⏻
(POWER)
G
PANEL BOARD
CN602
(Page 68)
D631-633
ORANGE:DISC IN
GREEN :PLAY
R696 75
R695 75
R694 75
R693 75
R692 75
R691 75
D633 SML79423C ORG/GRN
D632 SML79423C ORG/GRN
D631 SML79423C ORG/GRN
Q615 BA1A4Z LED DRIVE
Q614 BA1A4Z LED DRIVE
Q613 BA1A4Z LED DRIVE
2.2
2
05

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

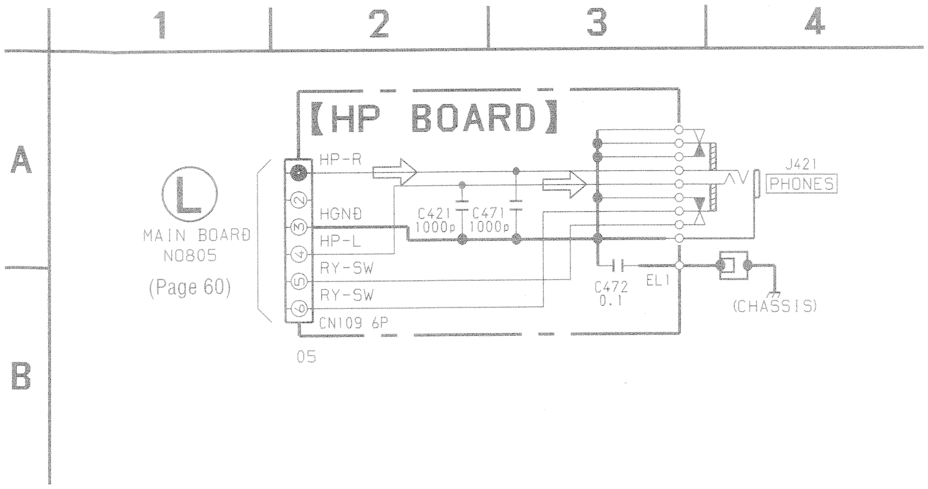
7-28. PRINTED WIRING BOARD – HP Section –

- See page 20 for Circuit Boards Location.
- See page 33 for Note on Printed Wiring Boards.


J421
1
2
3
4
5
6
7
8
9
【HP BOARD】
C471
C421
9
8
J421
PHONES
6
7
1
HP-JACK
5
4
2
3
L
MAIN BOARD
N0805
(page 55)
JW684
EL1
C472
1-668-209-
11
(12)
CN109
05
(CHASSIS)

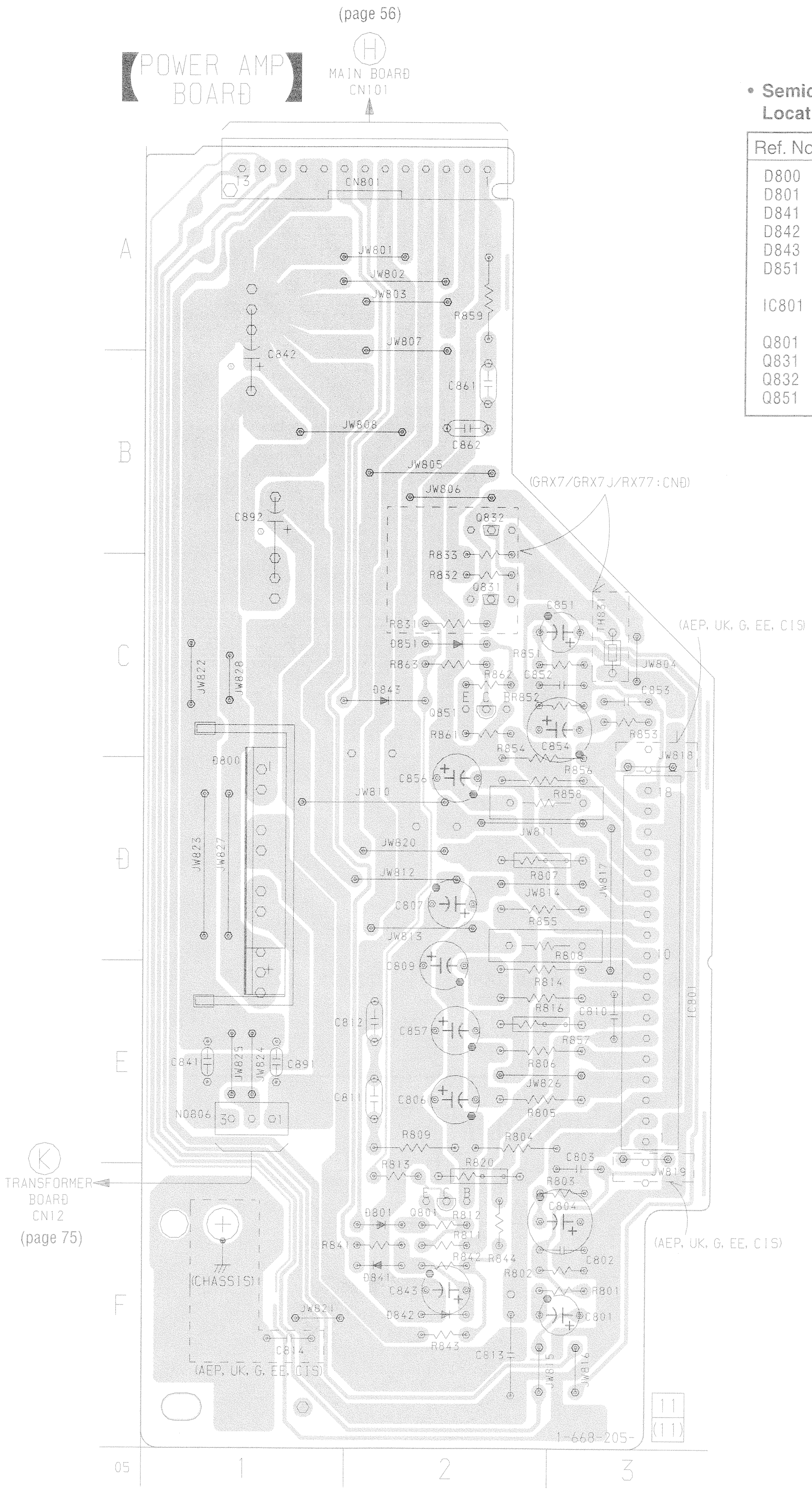
7-29. SCHEMATIC DIAGRAM – HP Section –

- See page 33 for Note on Schematic Diagram.


1
2
3
4
A
B
【HP BOARD】
L
MAIN BOARD
N0805
(Page 60)
HP-R
HGND
HP-L
RY-SW
RY-SW
CN109 6P
C421
1000p
C471
1000p
C472
0.1
EL1
J421
PHONES
(CHASSIS)
05

7-30. PRINTED WIRING BOARD – POWER AMP Section –

- See page 20 for Circuit Boards Location.
- See page 33 for Note on Printed Wiring Boards.

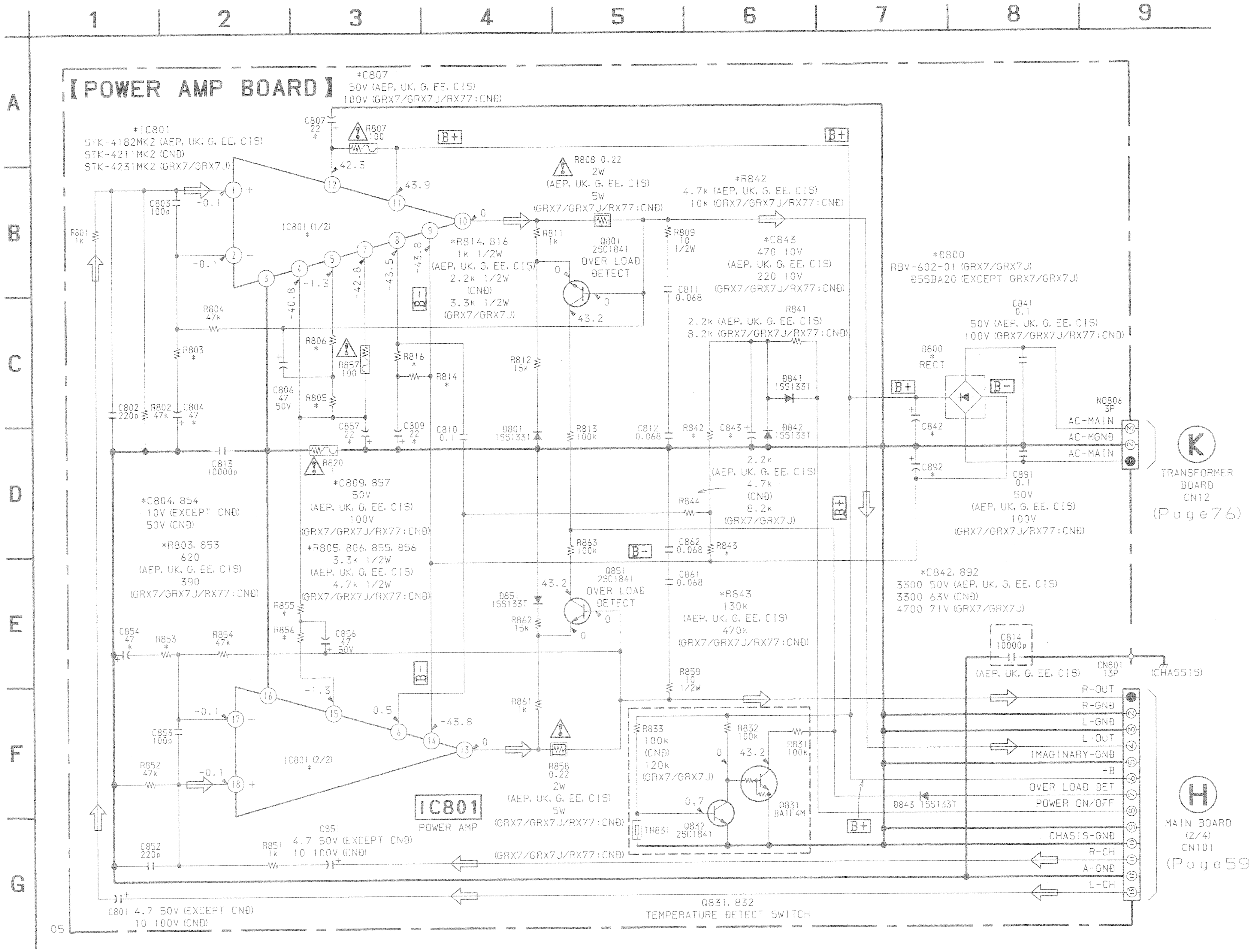

(page 56)
H
MAIN BOARD
CN101
POWER AMP
BOARD
CN801
13
1
A
B
C
D
E
F
1
2
3
05
JW801
JW802
JW803
R859
JW807
C842
C861
JW808
C862
JW805
JW806
(GRX7/GRX7J/RX77:CND)
C892
Q832
R833
R832
Q831
C851
TH831
R831
D851
R863
R851
JW804
(AEP, UK, G, EE, CIS)
R862
C852
JW822
JW828
D843
E C B
R852
C853
Q851
R861
R853
R854
C854
JW818
D800
C856
R856
JW810
R858
18
JW811
JW820
R807
JW823
JW827
JW812
JW817
JW814
C807
R855
JW813
R808
10
C809
R814
IC801
R816
C810
C812
C857
R857
C841
JW825
JW824
C891
R806
JW826
C811
C806
R805
N0806
30
01
R809
R804
C803
R813
R820
JW819
K
TRANSFORMER
BOARD
CN12
(page 75)
R803
E C B
C804
D801
Q801
R812
R811
(AEP, UK, G, EE, CIS)
R841
R842
R844
C802
D841
R802
CHASSIS
C843
R801
JW821
D842
C801
R843
C814
C813
(AEP, UK, G, EE, CIS)
JW815
JW816
11
(11)
1-668-205-

- **Semiconductor Location**

Ref. No.	Location
D800	D-1
D801	F-2
D841	F-2
D842	F-2
D843	C-2
D851	C-2
IC801	E-3
Q801	F-2
Q831	C-2
Q832	B-2
Q851	C-2

7-31. SCHEMATIC DIAGRAM – POWER AMP Section –

• See page 33 for Note on Schematic Diagram.

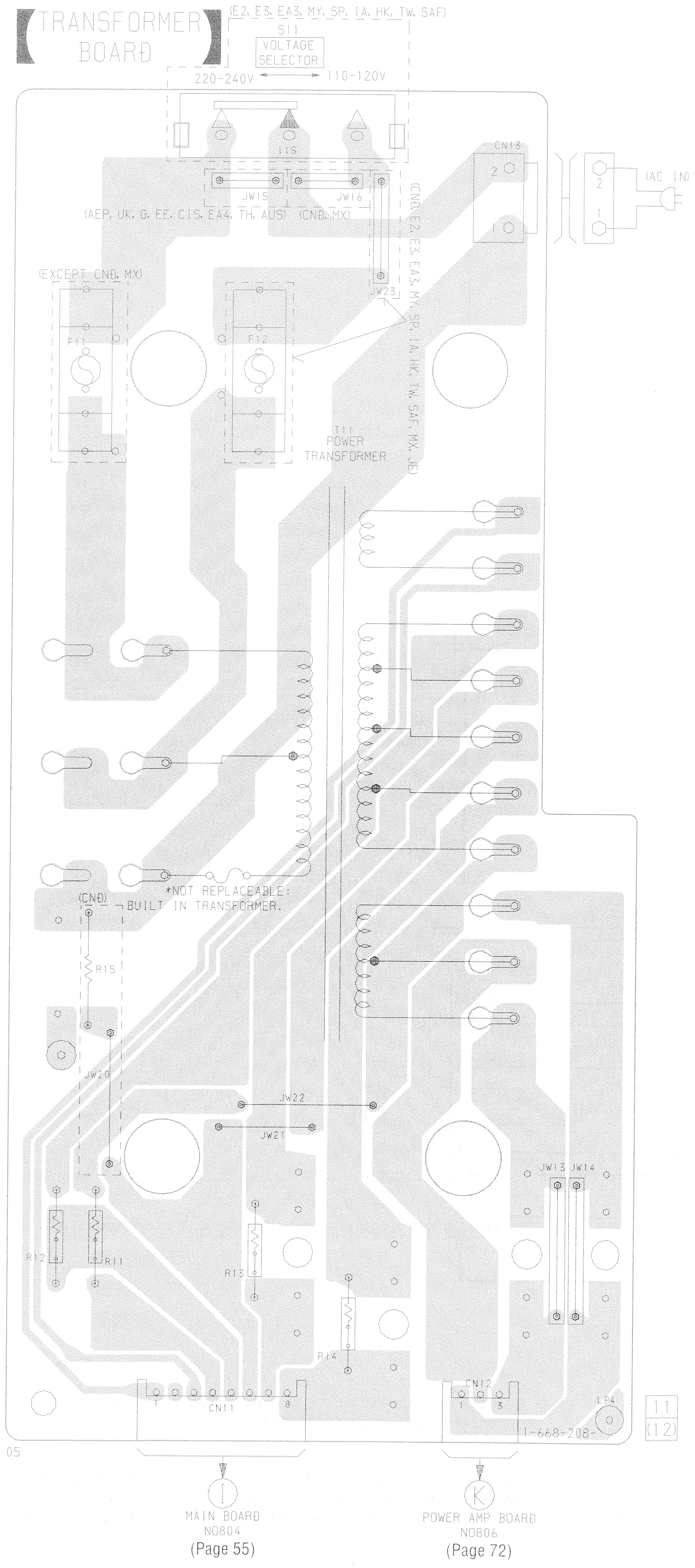

1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
[POWER AMP BOARD]
*C807
50V (AEP, UK, G, EE, CIS)
100V (GRX7/GRX7J/RX77:CND)
*IC801
STK-4182MK2 (AEP, UK, G, EE, CIS)
STK-4211MK2 (CND)
STK-4231MK2 (GRX7/GRX7J)
C807 22
R807 100
42.3
43.9
B+
R808 0.22
2W
(AEP, UK, G, EE, CIS)
5W
(GRX7/GRX7J/RX77:CND)
*R842
4.7k (AEP, UK, G, EE, CIS)
10k (GRX7/GRX7J/RX77:CND)
C803 100p
-0.1
IC801 (1/2)
R801 1k
R811 1k
Q801 2SC1841
OVER LOAD DETECT
R809 10 1/2W
*C843
470 10V
(AEP, UK, G, EE, CIS)
220 10V
(GRX7/GRX7J/RX77:CND)
*R814, 816
1k 1/2W
(AEP, UK, G, EE, CIS)
2.2k 1/2W
(CND)
3.3k 1/2W
(GRX7/GRX7J)
-1.3
-40.8
-42.8
-43.5
-43.8
B-
43.2
C811 0.068
R841
2.2k (AEP, UK, G, EE, CIS)
8.2k (GRX7/GRX7J/RX77:CND)
*D800
RBV-602-01 (GRX7/GRX7J)
D5SBA20 (EXCEPT GRX7/GRX7J)
C841 0.1
50V (AEP, UK, G, EE, CIS)
100V (GRX7/GRX7J/RX77:CND)
R804 47k
R803
R806
R857 100
R816
R814
R812 15k
D800 RECT
D841 1SS133T
C806 47 50V
R805
C802 220p
R802 47k
C804 47
C857 22
C809 22
C810 0.1
D801 1SS133T
R813 100k
C812 0.068
R842
C843
D842 1SS133T
C842
C892
ND806 3P
AC-MAIN
AC-MGND
AC-MAIN
K
TRANSFORMER BOARD CN12
(Page76)
C813 10000p
R820 1
*C809, 857
50V
(AEP, UK, G, EE, CIS)
100V
(GRX7/GRX7J/RX77:CND)
2.2k
(AEP, UK, G, EE, CIS)
4.7k
(CND)
8.2k
(GRX7/GRX7J)
R844
C891 0.1
50V
(AEP, UK, G, EE, CIS)
100V
(GRX7/GRX7J/RX77:CND)
*C804, 854
10V (EXCEPT CND)
50V (CND)
*R803, 853
620
(AEP, UK, G, EE, CIS)
390
(GRX7/GRX7J/RX77:CND)
*R805, 806, 855, 856
3.3k 1/2W
(AEP, UK, G, EE, CIS)
4.7k 1/2W
(GRX7/GRX7J/RX77:CND)
R863 100k
C862 0.068
R843
Q851 2SC1841
OVER LOAD DETECT
C861 0.068
*C842, 892
3300 50V (AEP, UK, G, EE, CIS)
3300 63V (CND)
4700 71V (GRX7/GRX7J)
D851 1SS133T
R862 15k
*R843
130k
(AEP, UK, G, EE, CIS)
470k
(GRX7/GRX7J/RX77:CND)
C854 47
R853
R854 47k
R855
R856
C856 47 50V
C814 10000p
(AEP, UK, G, EE, CIS)
CN801 13P
(CHASSIS)
R859 10 1/2W
R-OUT
R-GND
L-GND
L-OUT
IMAGINARY-GND
+B
OVER LOAD DET
POWER ON/OFF
CHASIS-GND
R-CH
A-GND
L-CH
-0.1
0.5
R861 1k
R833
100k
(CND)
120k
(GRX7/GRX7J)
R832 100k
R831 100k
C853 100p
IC801 (2/2)
R858 0.22
2W
(AEP, UK, G, EE, CIS)
5W
(GRX7/GRX7J/RX77:CND)
Q831 BA1F4M
D843 1SS133T
H
MAIN BOARD (2/4) CN101
(Page59)
R852 47k
0.7
TH831
Q832 2SC1841
IC801
POWER AMP
C852 220p
C851
4.7 50V (EXCEPT CND)
10 100V (CND)
R851 1k
C801 4.7 50V (EXCEPT CND)
10 100V (CND)
Q831, 832
TEMPERATURE DETECT SWITCH
05

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

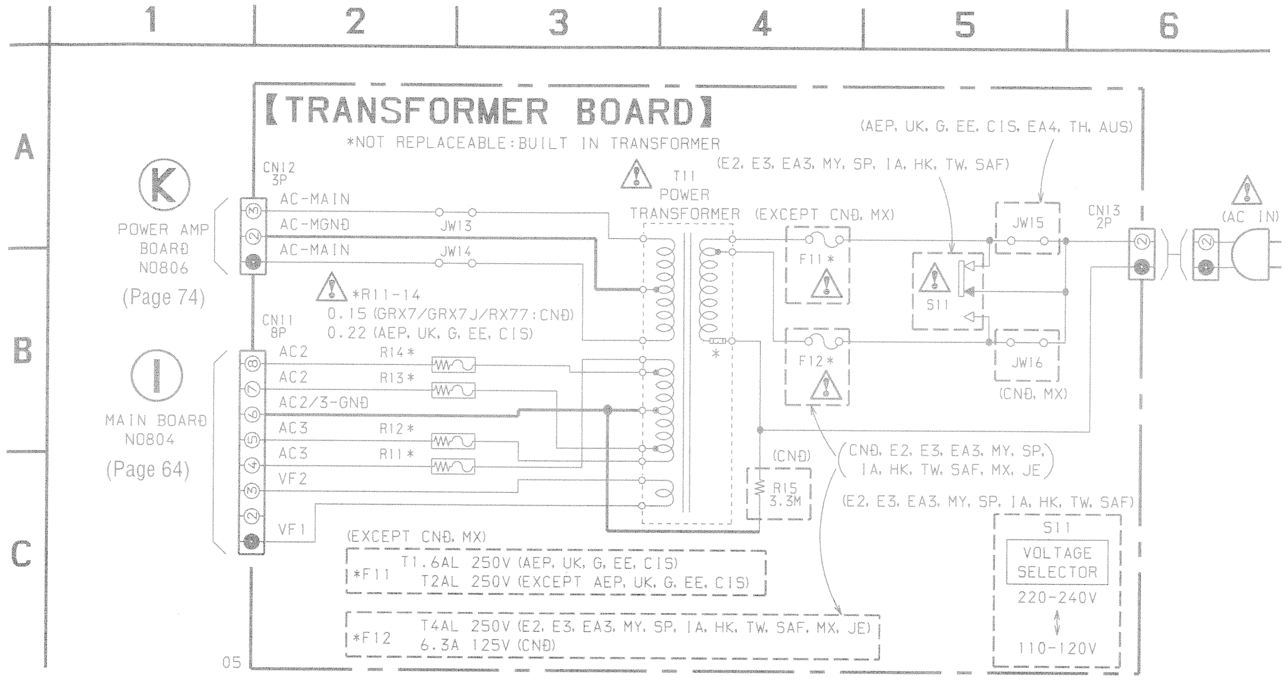
7-32. PRINTED WIRING BOARD – TRANSFORMER Section –

- See page 20 for Circuit Boards Location. • See page 33 for Note on Printed Wiring Board.


【TRANSFORMER BOARD】
(E2, E3, EA3, MY, SP, IA, HK, TW, SAF)
S11
VOLTAGE SELECTOR
220-240V
110-120V
CN13
2
1
(AC IN)
JW15
JW16
(AEP, UK, G, EE, CIS, EA4, TH, AUS)
(CND, MX)
(CND, E2, E3, EA3, MY, SP, IA, HK, TW, SAF, MX, JE)
(EXCEPT CND, MX)
F11
F12
JW23
T11
POWER
TRANSFORMER
*NOT REPLACEABLE:
BUILT IN TRANSFORMER.
(CND)
R15
JW20
JW22
JW21
JW13
JW14
R12
R11
R13
R14
CN11
8
CN12
1
3
1-668-208-
11
(12)
05
I
MAIN BOARD
N0804
(Page 55)
K
POWER AMP BOARD
N0806
(Page 72)

7-33. SCHEMATIC DIAGRAM – TRANSFORMER Section –

- See page 33 for Note on Schematic Diagram.

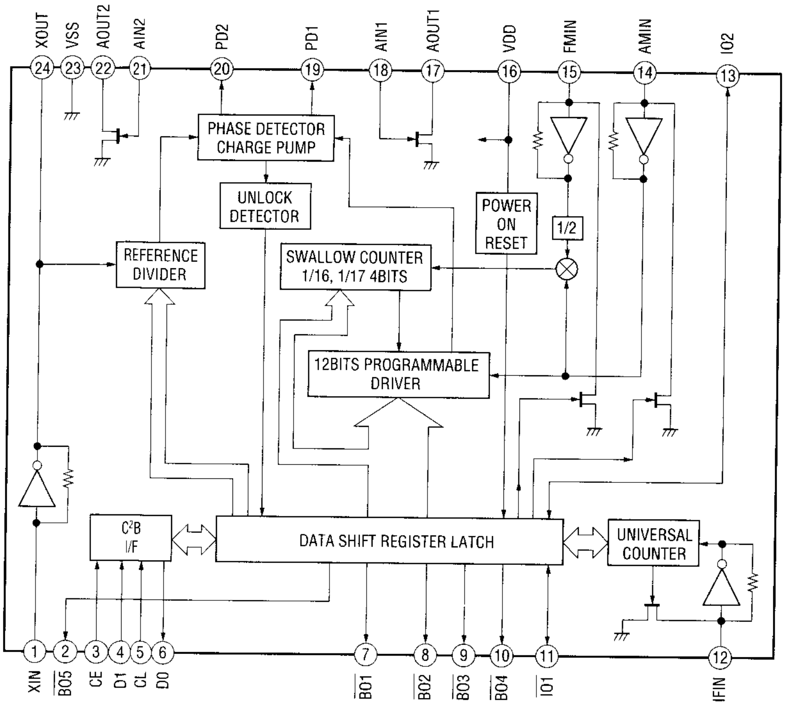

1
2
3
4
5
6
A
B
C
【TRANSFORMER BOARD】
*NOT REPLACEABLE:BUILT IN TRANSFORMER
(AEP, UK, G, EE, CIS, EA4, TH, AUS)
(E2, E3, EA3, MY, SP, IA, HK, TW, SAF)
K
POWER AMP BOARD
N0806
(Page 74)
CN12
3P
AC-MAIN
AC-MGND
AC-MAIN
JW13
JW14
T11
POWER
TRANSFORMER
(EXCEPT CND, MX)
F11*
S11
JW15
CN13
2P
(AC IN)
JW16
(CND, MX)
*R11-14
0.15 (GRX7/GRX7J/RX77:CND)
0.22 (AEP, UK, G, EE, CIS)
CN11
8P
I
MAIN BOARD
N0804
(Page 64)
AC2
R14*
AC2
R13*
AC2/3-GND
AC3
R12*
AC3
R11*
VF2
VF1
F12*
(CND)
R15
3.3M
(CND, E2, E3, EA3, MY, SP, IA, HK, TW, SAF, MX, JE)
(E2, E3, EA3, MY, SP, IA, HK, TW, SAF)
S11
VOLTAGE
SELECTOR
220-240V
110-120V
(EXCEPT CND, MX)
*F11 T1.6AL 250V (AEP, UK, G, EE, CIS)
T2AL 250V (EXCEPT AEP, UK, G, EE, CIS)
*F12 T4AL 250V (E2, E3, EA3, MY, SP, IA, HK, TW, SAF, MX, JE)
6.3A 125V (CND)
05

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

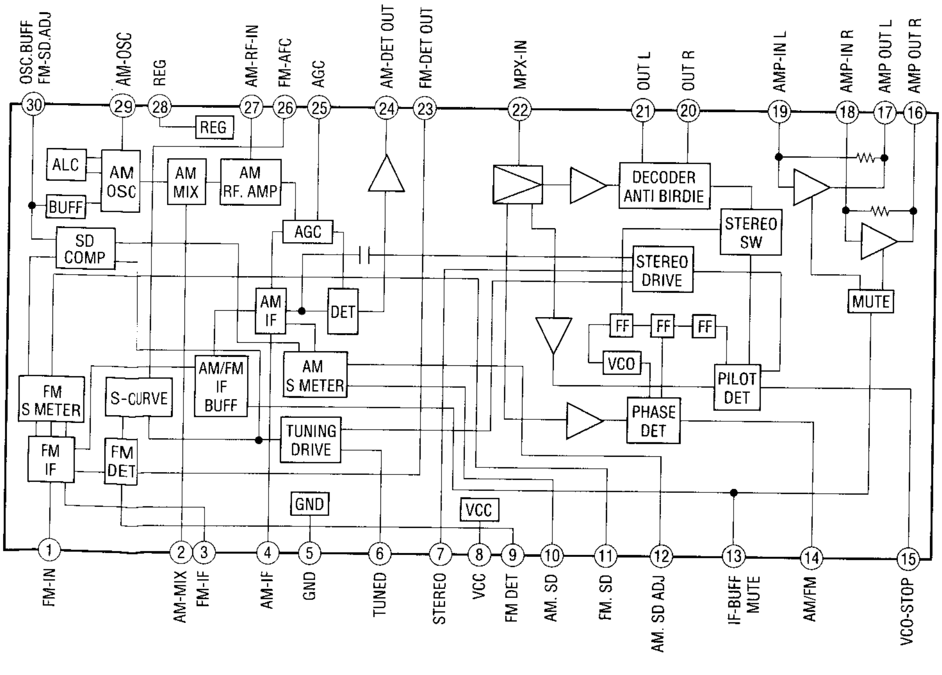
- **IC Block Diagrams**

– TCB Board –

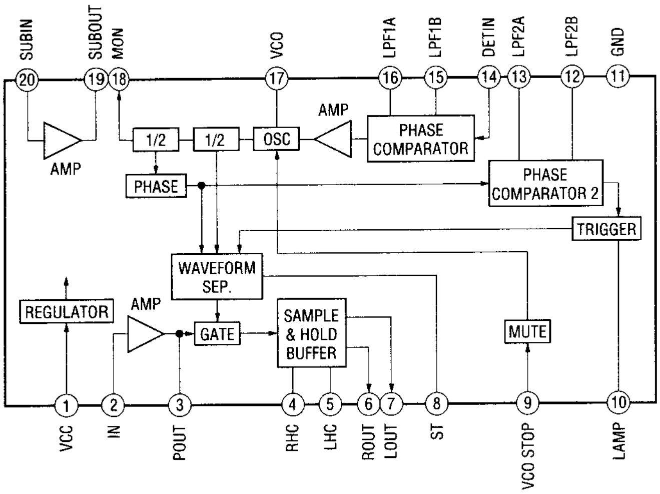
IC21 LC72130 (AEP, UK, German, East European, CIS models)


XOUT
VSS
AOUT2
AIN2
PD2
PD1
AIN1
AOUT1
VDD
FMIN
AMIN
IO2
24
23
22
21
20
19
18
17
16
15
14
13
PHASE DETECTOR
CHARGE PUMP
UNLOCK
DETECTOR
POWER
ON
RESET
1/2
REFERENCE
DIVIDER
SWALLOW COUNTER
1/16, 1/17 4BITS
12BITS PROGRAMMABLE
DRIVER
C²B
I/F
DATA SHIFT REGISTER LATCH
UNIVERSAL
COUNTER
1
2
3
4
5
6
7
8
9
10
11
12
XIN
BO5
CE
DI
CL
DO
BO1
BO2
BO3
BO4
IO1
IFIN

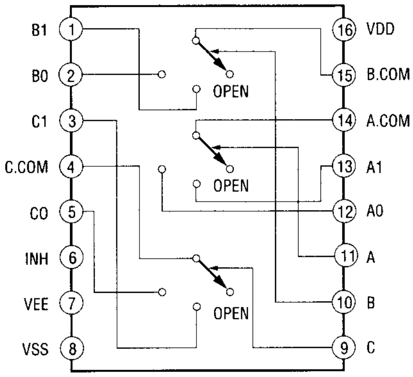
IC41 LA1838 (AEP, UK, German, East European, CIS models)


OSC.BUFF
FM-SD.ADJ
AM-OSC
REG
AM-RF-IN
FM-AFC
AGC
AM-DET OUT
FM-DET OUT
MPX-IN
OUT L
OUT R
AMP-IN L
AMP-IN R
AMP OUT L
AMP OUT R
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
REG
ALC
AM
OSC
BUFF
AM
MIX
AM
RF. AMP
AGC
SD
COMP
DECODER
ANTI BIRDIE
STEREO
SW
STEREO
DRIVE
MUTE
AM
IF
DET
FF
FF
FF
VCO
AM/FM
IF
BUFF
AM
S METER
PILOT
DET
FM
S METER
S-CURVE
TUNING
DRIVE
PHASE
DET
FM
IF
FM
DET
GND
VCC
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
FM-IN
AM-MIX
FM-IF
AM-IF
GND
TUNED
STEREO
VCC
FM DET
AM. SD
FM. SD
AM. SD ADJ
IF-BUFF
MUTE
AM/FM
VCO-STOP

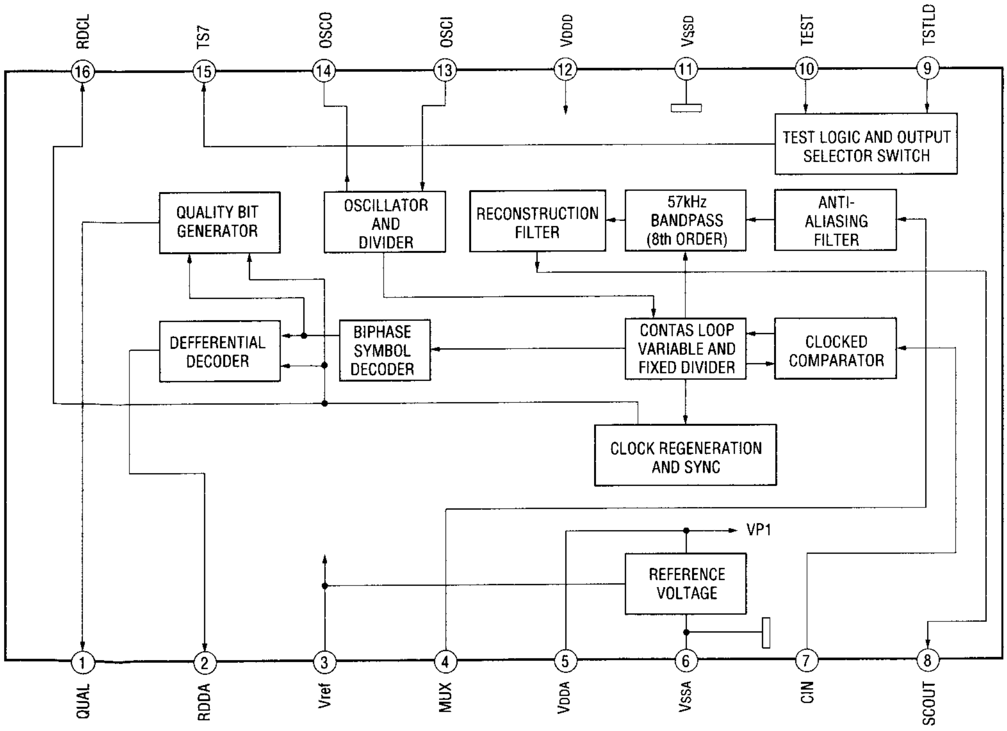
IC1701 IR3R42 (East European, CIS models)


SUBIN
SUBOUT
MON
VCO
LPF1A
LPF1B
DETIN
LPF2A
LPF2B
GND
20
19
18
17
16
15
14
13
12
11
AMP
1/2
1/2
OSC
AMP
PHASE COMPARATOR
PHASE
PHASE COMPARATOR 2
TRIGGER
WAVEFORM SEP.
REGULATOR
AMP
GATE
SAMPLE & HOLD BUFFER
MUTE
1
2
3
4
5
6
7
8
9
10
VCC
IN
POUT
RHC
LHC
ROUT
LOUT
ST
VCO STOP
LAMP

IC1702 μPD4053BC (East European, CIS models)

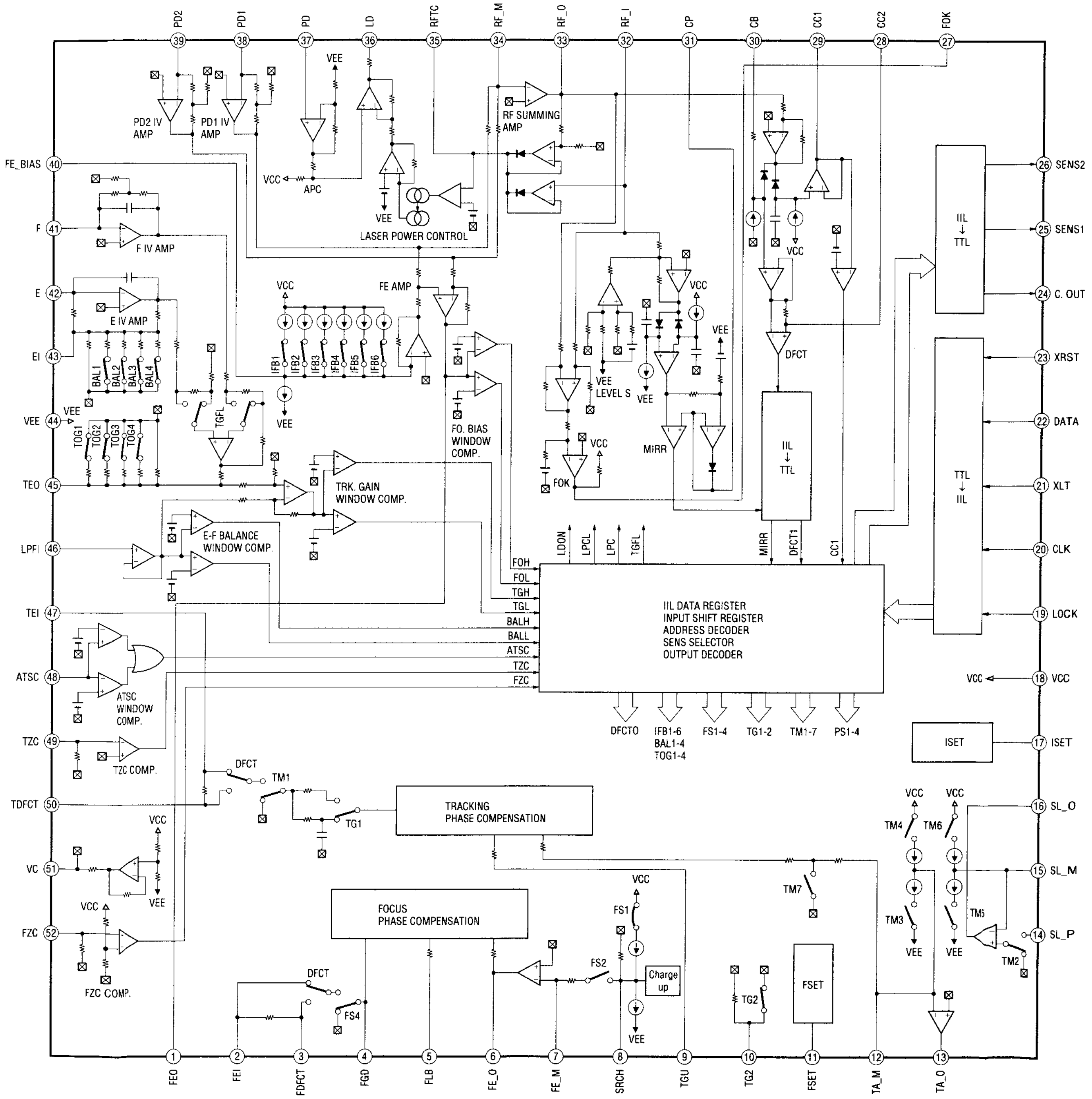

B1
B0
C1
C.COM
CO
INH
VEE
VSS
1
2
3
4
5
6
7
8
16
15
14
13
12
11
10
9
VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN
OPEN
OPEN

IC1752 BU1922 (AEP, UK, German models)


RDCL
TS7
OSCO
OSCI
VDDD
VSSD
TEST
TSTLD
16
15
14
13
12
11
10
9
TEST LOGIC AND OUTPUT SELECTOR SWITCH
QUALITY BIT GENERATOR
OSCILLATOR AND DIVIDER
RECONSTRUCTION FILTER
57kHz BANDPASS (8th ORDER)
ANTI-ALIASING FILTER
DEFFERENTIAL DECODER
BIPHASE SYMBOL DECODER
CONTAS LOOP VARIABLE AND FIXED DIVIDER
CLOCKED COMPARATOR
CLOCK REGENERATION AND SYNC
VP1
REFERENCE VOLTAGE
1
2
3
4
5
6
7
8
QUAL
RDDA
Vref
MUX
VDDA
VSSA
CIN
SCOUT

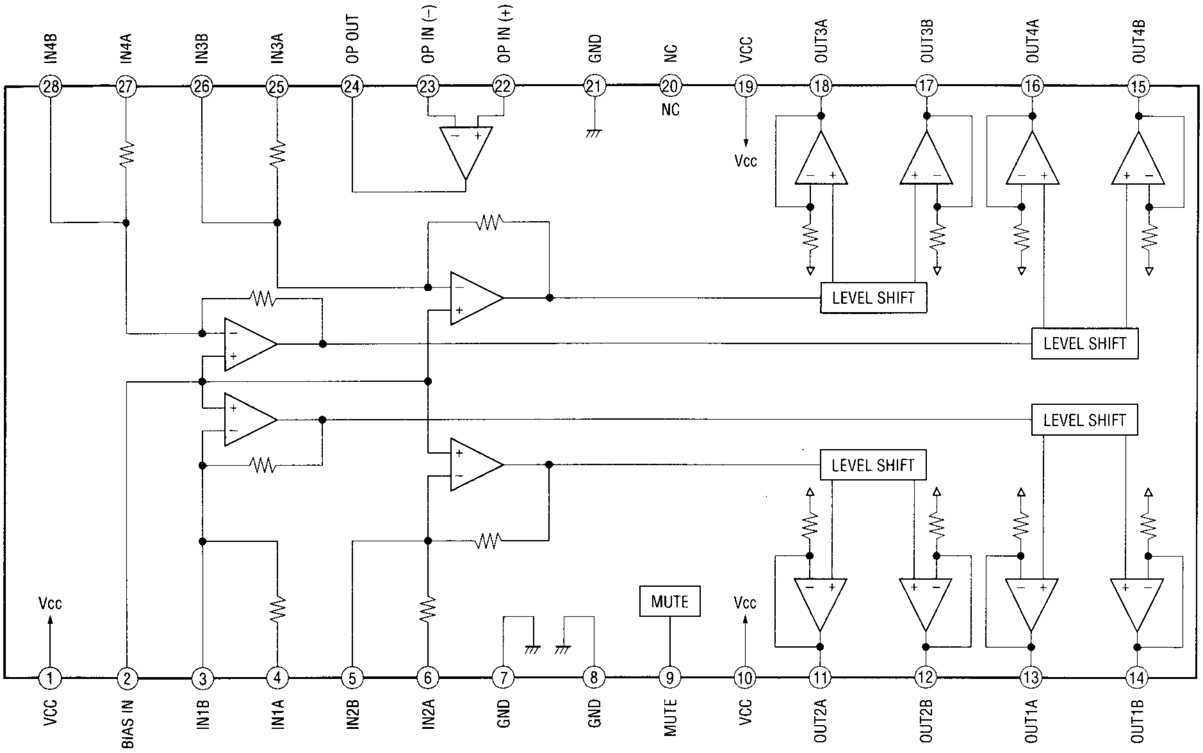
– BD Board –

IC101 CXA1992AR



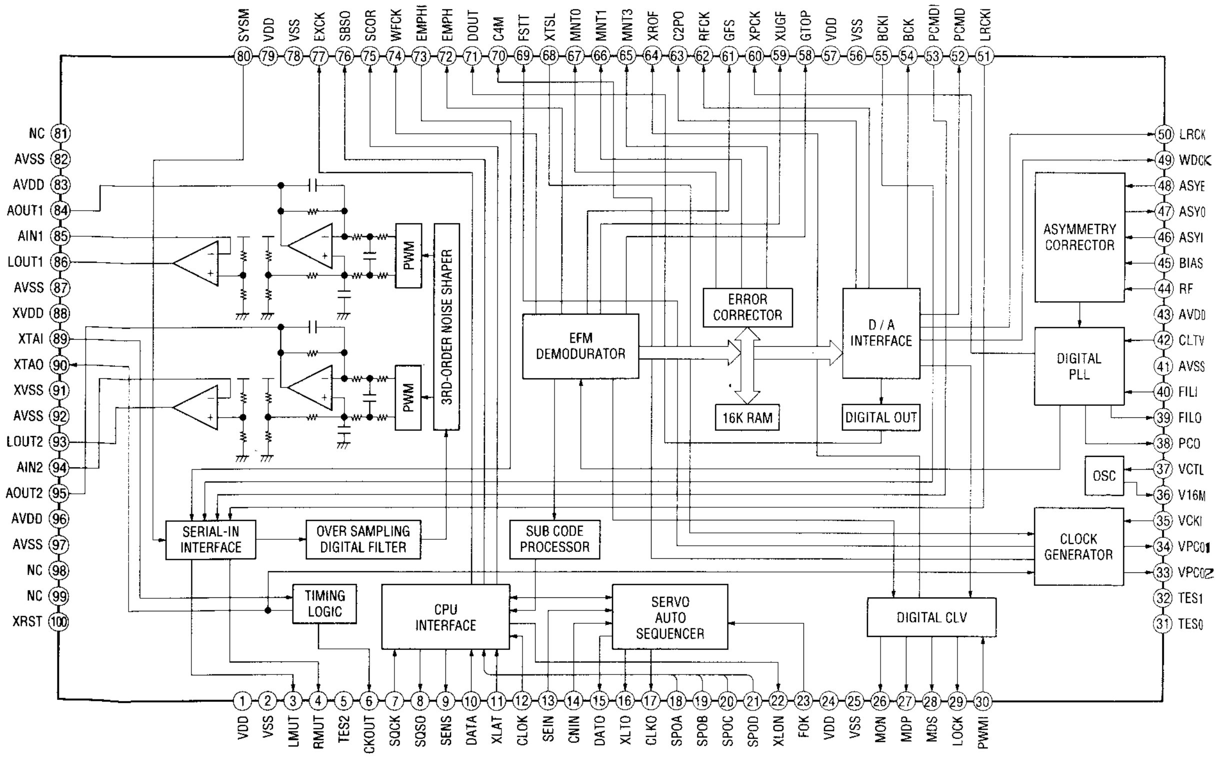
PD2
PD1
PD
LD
RFTC
RF_M
RF_O
RF_I
CP
CB
CC1
CC2
FOK
PD2 IV AMP
PD1 IV AMP
VEE
VCC
APC
LASER POWER CONTROL
RF SUMMING AMP
FE_BIAS
F
F IV AMP
E
E IV AMP
EI
BAL1
BAL2
BAL3
BAL4
VEE
TOG1
TOG2
TOG3
TOG4
TGFL
TEO
LPFI
TEI
ATSC
TZC
TDFCT
VC
FZC
FE AMP
IFB1
IFB2
IFB3
IFB4
IFB5
IFB6
FO. BIAS WINDOW COMP.
TRK. GAIN WINDOW COMP.
E-F BALANCE WINDOW COMP.
ATSC WINDOW COMP.
TZC COMP.
FZC COMP.
LEVEL S
MIRR
FOK
DFCT
IIL → TTL
TTL → IIL
SENS2
SENS1
C. OUT
XRST
DATA
XLT
CLK
LOCK
VCC
ISET
SL_O
SL_M
SL_P
LDON
LPCL
LPC
TGFL
MIRR
DFCT1
CC1
FOH
FOL
TGH
TGL
BALH
BALL
ATSC
TZC
FZC
IIL DATA REGISTER
INPUT SHIFT REGISTER
ADDRESS DECODER
SENS SELECTOR
OUTPUT DECODER
DFCTO
IFB1-6
BAL1-4
TOG1-4
FS1-4
TG1-2
TM1-7
PS1-4
TM1
TG1
TRACKING PHASE COMPENSATION
FOCUS PHASE COMPENSATION
FS1
FS2
FS4
Charge up
TG2
FSET
TM2
TM3
TM4
TM5
TM6
TM7
FEO
FEI
FDFCT
FGD
FLB
FE_O
FE_M
SRCH
TGU
TG2
FSET
TA_M
TA_O

IC102 BA5941FP-E2



28 IN4B
27 IN4A
26 IN3B
25 IN3A
24 OP OUT
23 OP IN (–)
22 OP IN (+)
21 GND
20 NC
NC
19 VCC
Vcc
18 OUT3A
17 OUT3B
16 OUT4A
15 OUT4B
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
MUTE
Vcc
Vcc
1 VCC
2 BIAS IN
3 IN1B
4 IN1A
5 IN2B
6 IN2A
7 GND
8 GND
9 MUTE
10 VCC
11 OUT2A
12 OUT2B
13 OUT1A
14 OUT1B

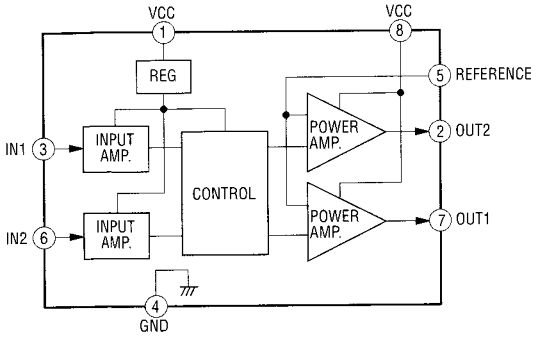
IC103 CXD2519Q



80 SYSM
79 VDD
78 VSS
77 EXCK
76 SBSO
75 SCOR
74 WFCK
73 EMPHI
72 EMPH
71 DOUT
70 C4M
69 FSTT
68 XTSL
67 MNT0
66 MNT1
65 MNT3
64 XROF
63 C2PO
62 RFCK
61 GFS
60 XPCK
59 XUGF
58 GTOP
57 VDD
56 VSS
55 BCKI
54 BCK
53 PCMDI
52 PCMD
51 LRCKI
81 NC
82 AVSS
83 AVDD
84 AOUT1
85 AIN1
86 LOUT1
87 AVSS
88 XVDD
89 XTAI
90 XTAO
91 XVSS
92 AVSS
93 LOUT2
94 AIN2
95 AOUT2
96 AVDD
97 AVSS
98 NC
99 NC
100 XRST
50 LRCK
49 WDCK
48 ASYE
47 ASYO
46 ASYI
45 BIAS
44 RF
43 AVDD
42 CLTV
41 AVSS
40 FILI
39 FILO
38 PCO
37 VCTL
36 V16M
35 VCKI
34 VPCO1
33 VPCO2
32 TES1
31 TES0
PWM
PWM
3RD-ORDER NOISE SHAPER
EFM DEMODURATOR
ERROR CORRECTOR
16K RAM
D / A INTERFACE
DIGITAL OUT
ASYMMETRY CORRECTOR
DIGITAL PLL
OSC
CLOCK GENERATOR
SERIAL-IN INTERFACE
OVER SAMPLING DIGITAL FILTER
SUB CODE PROCESSOR
TIMING LOGIC
CPU INTERFACE
SERVO AUTO SEQUENCER
DIGITAL CLV
1 VDD
2 VSS
3 LMUT
4 RMUT
5 TES2
6 CKOUT
7 SQCK
8 SQSO
9 SENS
10 DATA
11 XLAT
12 CLOK
13 SEIN
14 CNIN
15 DATO
16 XLTO
17 CLKO
18 SPOA
19 SPOB
20 SPOC
21 SPOD
22 XLON
23 FOK
24 VDD
25 VSS
26 MON
27 MDP
28 MDS
29 LOCK
30 PWMI

– MOTOR (TURN) Board –

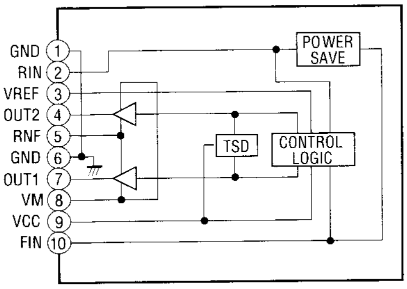
IC701 M54641L



VCC
1
VCC
8
REG
5 REFERENCE
POWER AMP.
2 OUT2
IN1 3
INPUT AMP.
CONTROL
IN2 6
INPUT AMP.
POWER AMP.
7 OUT1
4
GND

– MOTOR (SLIDE) Board –

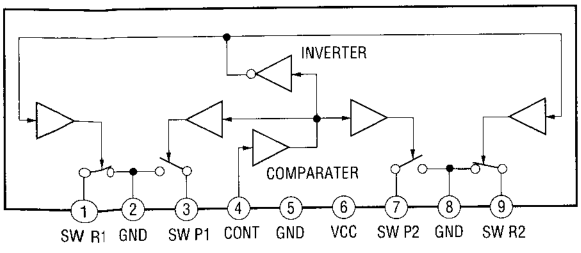
IC801 BA6286N



GND 1
RIN 2
VREF 3
OUT2 4
RNF 5
GND 6
OUT1 7
VM 8
VCC 9
FIN 10
POWER SAVE
TSD
CONTROL LOGIC

– AUDIO Board –

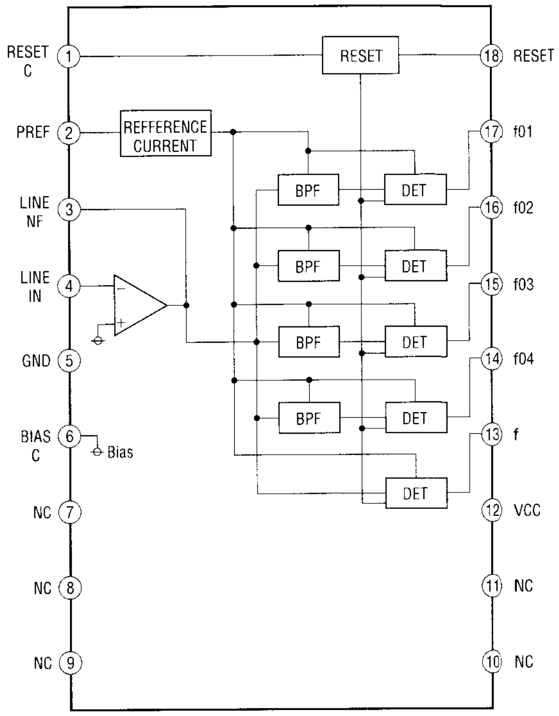
IC602 μPC1330HA



INVERTER
COMPARATER
1 SW R1
2 GND
3 SW P1
4 CONT
5 GND
6 VCC
7 SW P2
8 GND
9 SW R2

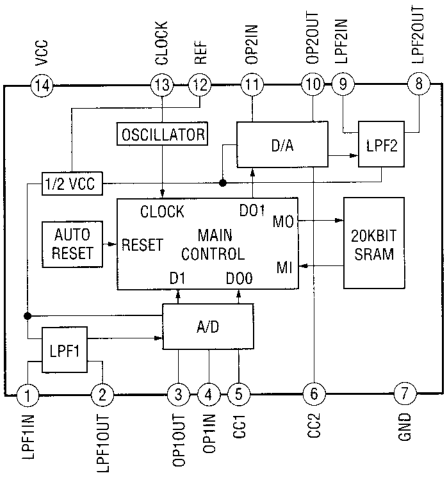
– PANEL Board –

IC603 BA3833F-E2



RESET C 1
PREF 2
LINE NF 3
LINE IN 4
GND 5
BIAS C 6
NC 7
NC 8
NC 9
RESET
REFFERENCE CURRENT
Bias
BPF
DET
BPF
DET
BPF
DET
BPF
DET
DET
18 RESET
17 f01
16 f02
15 f03
14 f04
13 f
12 VCC
11 NC
10 NC

IC751 M65850FP (Saudi Arabia model)



VCC 14
CLOCK 13
REF 12
OP2IN 11
OP2OUT 10
LPF2IN 9
LPF2OUT 8
OSCILLATOR
D/A
LPF2
1/2 VCC
CLOCK
DO1
MO
AUTO RESET
RESET
MAIN CONTROL
MI
20KBIT SRAM
D1
DO0
A/D
LPF1
1 LPF1IN
2 LPF1OUT
3 OP1OUT
4 OP1IN
5 CC1
6 CC2
7 GND

7-34. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 μPD780018AYGF-011-3BA (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	LINE-MUTE	O	Line muting on/off control signal output terminal "L": muting on
2	DBFB-H/L	O	DBFB normal/high selection signal output to the M62442FP (IC101) "L": DBFB high, "H": DBFB low
3	M62442-LATCH	O	Serial data latch pulse output to the M62442FP (IC101)
4	KEYCON-LATCH	O	Serial data latch pulse output terminal Not used (open)
5	POWER	O	Power on/off control signal output for the audio system (+5V) and deck, panel, audio system (+7V) "L": power on, "H": standby
6	F-RELAY	O	Relay drive signal output for the speaker protect "H": on
7	R-RELAY	O	Relay drive signal output for the speaker protect "H": on Not used (open)
8	PL-RELAY	O	Relay drive signal output for the speaker protect "H": on Not used (open)
9	VPP	—	Ground terminal
10	X2	O	Main system clock output terminal (5 MHz)
11	X1	I	Main system clock input terminal (5 MHz)
12	VDD	—	Power supply terminal (+5V)
13	XT2	O	Sub system clock output terminal (32.768 kHz)
14	XT1	I	Sub system clock input terminal (32.768 kHz)
15	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC502) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
16	$\overline{\text{AC-CUT}}$	I	AC off detection signal input from the reset signal generator (IC502)
17	CAPM-CNT1P	O	Capstan motor (M1) drive signal output terminal
18	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2519Q (IC103)
19	SOFT-TEST	O	Output terminal for the software test (open)
20	NCO	O	Not used (open)
21	RDS-INT	I	Serial data reading clock signal input from the RDS decoder (IC1752) Used for the AEP, UK, German models (Except AEP, UK, German models: not used (fixed at "L"))
22	RDS-DATA	I	Serial data input from the RDS decoder (IC1752) Used for the AEP, UK, German models (Except AEP, UK, German models: not used (fixed at "L"))
23	AVDD	—	Power supply terminal (+5V) (for A/D conversion)
24	AVREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
25	ADJ	I	Setting terminal for the CD test mode Normally: fixed at "H"
26	A-SHUT	I	Shut off detection signal input from the deck-A side reel pulse detector (IC1001)
27	B-SHUT	I	Shut off detection signal input from the deck-B side reel pulse detector (IC1002)
28	B-HALF	I	Detection input from the deck-B half detect switch (S1006)
29	CLK-CHECK	I	Not used (fixed at "L")
30	SPEC-IN	I	Setting terminal for the version
31	AMS-IN	I	Automatic music sensor detection signal input from the HA12215F (IC301)
32	DEMO-CHANGE	I	Setting terminal for the demonstration H/L Fixed at "L"
33	AVSS	—	Ground terminal (for A/D conversion)
34	SQ-DATA-IN	I	Sub-code Q data input from the CXD2519Q (IC103)
35	NCO	O	Not used (open)
36	SQ-CLK (D-OUT ON/OFF)	O	Sub-code Q data reading clock signal output to the CXD2519Q (IC103)
37	SUPERWOOFER-ON/OFF	O	Super woofer speaker on/off control signal output terminal Not used (open)
38	SUPERWOOFER MODE	O	Super woofer speaker mode control signal output terminal Not used (open)
39	NIL	I	Not used (fixed at "L")
40	VSS	—	Ground terminal

Pin No.	Pin Name	I/O	Function
41	DELAY-CONT	O	Serial data latch pulse output terminal Not used (open)
42	PL-LATCH	O	Serial data latch pulse output terminal Not used (open)
43	COM-DIN	I	Serial data input terminal Not used (fixed at "L")
44	COM-DOUT	O	Serial data output terminal Not used (open)
45	COM-CLK	O	Serial data transfer clock signal output terminal Not used (open)
46	CD-POWER	O	Power on/off control signal output for the CD mechanism deck section "H": power on, "L": standby
47	CD-DATA	O	Serial data output to the CXD2519Q (IC103)
48	CD-CLK	O	Serial data transfer clock signal output to the CXD2519Q (IC103)
49	PL-CLK	O	Serial data transfer clock signal output terminal Not used (open)
50	PL-DATA	O	Serial data output terminal Not used (open)
51	M62442-CLK	O	Serial data transfer clock signal output to the M62442FP (IC101)
52	M62442-DATA	O	Serial data output to the M62442FP (IC101)
53	LEVEL-CONT-A	O	Level control signal output terminal Not used (open)
54	LEVEL-CONT-B	O	Level control signal output terminal Not used (open)
55	IIC-DATA	I/O	Communication data bus with the fluorescent indicator tube driver (IC601)
56	IIC-CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the fluorescent indicator tube driver (IC601)
57	$\overline{\text{XRST}}$	O	Reset signal output to the CXA1992AR (IC101), BA5941FP (IC102) and CXD2519Q (IC103) on the CD mechanism deck section "L": reset
58	XLT	O	Serial data latch pulse output to the CXD2519Q (IC103)
59	FOCUS-SW	O	Focus control signal output terminal Not used (open)
60	TBL-L	O	Motor drive signal output to the disc tray turn motor driver (IC701) *1
61	TBL-R	O	Motor drive signal output to the disc tray turn motor driver (IC701) *1
62	NCO	O	Not used (open)
63	LOAD-OUT	O	Motor drive signal output to the disc tray slide motor driver (IC801) *2
64	LOAD-IN	O	Motor drive signal output to the disc tray slide motor driver (IC801) *2
65	ST-CLK	O	PLL serial data transfer clock signal output to the FM/AM tuner unit or PLL (IC21)
66	ST-DIN	I	PLL serial data input from the FM/AM tuner unit or PLL (IC21)
67	ST-DOUT	O	PLL serial data output to the FM/AM tuner unit or PLL (IC21)
68	ST-CE	O	PLL chip enable signal output to the FM/AM tuner unit or PLL (IC21)
69	TUNED	I	Tuning detection signal input from the FM/AM tuner unit or LA1838 (IC41) "L": tuned
70	STEREO	I	FM stereo detection signal input from the FM/AM tuner unit or LA1838 (IC41) "L": stereo
71	VSS	—	Ground terminal

*1 Disc tray turn motor (M701) control

Mode Terminal	STOP	COUNTER-CLOCKWISE	CLOCKWISE	BRAKE
TBL-L (pin (60))	"H"	"L"	"H"	"L"
TBL-R (pin (61))	"H"	"H"	"L"	"L"

*2 Disc tray slide motor (M801) control

Mode Terminal	STOP	TABLE IN	TABLE OUT	BRAKE
LOAD-OUT (pin (63))	"H"	"H"	"L"	"L"
LOAD-IN (pin (64))	"H"	"L"	"H"	"L"

Pin No.	Pin Name	I/O	Function
72	ST-MUTE	O	Tuner muting control signal output to the FM/AM tuner unit or LA1838 (IC41) "L": muting on
73	SENS2	I	Internal status (SENSE) signal input from the CXA1992AR (IC101)
74	SENS	I	Internal status (SENSE) signal input from the CXD2519Q (IC103)
75	DISC-SENS	I	Disc status detection signal input from the disc sensor (IC703)
76	TBL-SENS	I	Disc tray status detection signal input from the disc tray sensor (IC702)
77	CAPM-CNT2P	O	Capstan motor (M1) drive signal output terminal
78	ENC3	I	Detection signal input from the disc tray address detect rotary encoder (S811)
79	ENC2	I	
80	ENC1	I	
81	OUT-OPEN	I	Detection signal input from the disc tray open/close detect switch (S801) "L": open, "H": close
82	CAP-M-H/L	O	High/normal speed selection signal output of the capstan motor (M1) "L": high speed, "H": normal speed
83	B-TRG	O	Deck-B side trigger plunger (SL2) drive signal output terminal
84	A-TRG	O	Deck-A side trigger plunger (SL1) drive signal output terminal
85	CAPM-CNT1M	O	Capstan motor (M1) drive signal output terminal
86	CAPM-CNT2M	O	Capstan motor (M1) drive signal output terminal
87	TC-MUTE	O	Line muting on/off selection signal output to the HA12215F (IC301) "L": muting off, "H": muting on
88	R/P-PASS	O	Recording/playback/pass selection signal output to the HA12215F (IC301) "L": recording mode
89	NR-ON/OFF	O	Dolby NR on/off selection signal output to the HA12215F (IC301) "L": dolby off, "H": dolby on
90	REC-MUTE	O	Recording muting on/off selection signal output to the HA12215F (IC301) "L": muting on, "H": muting off
91	CLK-OUT	O	Clock output for the check Not used (open)
92	BIAS	O	Recording bias on/off selection signal output to the HA12215F (IC301) "L": bias off, "H": bias on
93	EQ-H/N	O	Normal/high speed selection signal output to the HA12215F (IC301) "L": normal speed, "H": high speed
94	PB-A/B	O	Deck-A/B selection signal output to the HA12215F (IC301) "L": deck-A, "H": deck-B
95	A-PLAY-SW	I	Detection input from the deck- A play detect switch (S1001) "H": deck-A play
96	B-PLAY-SW	I	Detection input from the deck- B play detect switch (S1002) "H": deck-B play
97	TC-RELAY	O	Recording/playback select signal output to the REC/PB switch (IC602) "L": playback, "H": recording
98	A-HALF	I	Detection input from the deck-A cassette detect switch (S1003) "L": cassette in, "H": no cassette
99	ALC-ON/OFF	O	Automatic limiter control signal output to the HA12215F (IC301) "L": limiter on
100	STK-MUTE	O	Power amplifier on/off selection signal output terminal "L": on, "H": standby

• PANEL BOARD IC601 TMP87PM74F-6695
(FLUORESCENT INDICATOR TUBE DRIVE, LED DRIVE, KEY CONTROL)

Pin No.	Pin Name	I/O	Function
1	LED3	O	LED drive signal output terminal Not used (open)
2	LED4	O	LED drive signal output terminal Not used (open)
3	LED5	O	LED drive signal output terminal (DISC 3)
4	LED6	O	LED drive signal output terminal (DISC 2)
5	LED7	O	LED drive signal output terminal (DISC 1)
6	LED8	O	LED drive signal output terminal (ENTER/NEXT, GROOVE)
7	VSS	—	Ground terminal
8	X-OUT	O	System clock output terminal (8 MHz)
9	X-IN	I	System clock input terminal (8 MHz)
10	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC502) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
11	LED9	O	LED drive signal output terminal (JOG, DJ MIX)
12	LED10	O	LED drive signal output terminal (NON-STOP, + ▶▶, – ◀◀)
13	TEST	I	Connected to ground
14	LED11	O	LED drive signal output terminal Not used (open)
15	LED12	O	LED drive signal output terminal (EFFECT) Used for the GRX7/GRX7J/RX77: Canadian (Except GRX7/GRX7J/RX77: Canadian; Not used (open))
16	LED13	O	LED drive signal output terminal (CD ▶ ❚❚)
17	LED14	O	LED drive signal output terminal (TAPE B ▶/◀)
18	LED15	O	LED drive signal output terminal (TAPE A ▶/◀)
19	VOL-A	I	Rotary encoder pulse input from the S602 (VOLUME)
20	VOL-B	I	Rotary encoder pulse input from the S602 (VOLUME)
21	JOG-A	I	Jog dial pulse input from the S601 (|◀◀ ↔ ▶▶| DJ MIX)
22	JOG-B	I	Jog dial pulse input from the S601 (|◀◀ ↔ ▶▶| DJ MIX)
23	SCL	I/O	Communication data reading clock signal input or transfer clock signal output with the system controller (IC501)
24	SDA	I/O	Communication data bus with the system controller (IC501)
25	L.SEL	O	LED selection signal output terminal
26	KEY-0	I	Key input terminal (A/D input) (S604 to 617) (S611 to 613 FILE SELECT, GEQ CONTROL, P FILE MEMORY; GRX7/GRX7J/RX77: Canadian model only) FILE SELECT (AEP, UK, German, East European, CIS models), EFFECT (GRX7/GRX7J/RX77: Canadian), SURROUND, KARAOKE PON/MPX, ■, TIMER SELECT, CLOCK/TIMER SET, DISPLAY/DEMO, FILE SELECT, GEQ CONTROL, P FILE MEMORY, FUNCTION, EDIT/DIRECTION, PLAY MODE/DOLBY NR, REPEAT keys input
27	KEY-1	I	Key input terminal (A/D input) (S619 to 625) FLASH, NON-STOP, – ◀◀, ENTER/NEXT, + ▶▶ , DBFB, GROOVE keys input
28	KEY-2	I	Key input terminal (A/D input) (S631 to 642) TUNER/BAND, CD ▶ ❚❚, TAPE B ▶/◀, TAPE A ▶/◀, I/⏻ (POWER), DISC 1/2/3, DISC SKIP/EX-CHANGE, ⏏ keys input
29	KEY-3	I	Key input terminal (A/D input) (S618, 655 to 659) (S655 PTY: AEP, UK, German models only) LOOP, PTY, ● REC, ❚❚ PAUSE, HI-DUB, CD SYNC, keys input
30	MODEL	I	Destination setting terminal
31	SPEANA RESET	O	Reset signal output terminal "H": reset Not used (open)
32	L+R	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for VACS, non-stop signal)
33	SIRCS	I	Remote control signal input from the remote control receiver (IC602)

Pin No.	Pin Name	I/O	Function
34	SPEANA-1	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for low frequency)
35	SPEANA-2	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for low and middle frequency)
36	SPEANA-3	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for middle and high frequency)
37	SPEANA-4	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for high frequency)
38	VASS	—	Ground terminal
39	VAREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
40	VDD	—	Power supply terminal (+5V)
41 to 53	GR1 to GR13	O	Grid drive signal output to the fluorescent indicator tube (FL601)
54 to 69	SEG1 to SEG16	O	Segment drive signal output to the fluorescent indicator tube (FL601)
70 to 72	SEG19 to SEG17	O	Segment drive signal output to the fluorescent indicator tube (FL601)
73 to 77	SEG24 to SEG20	O	Segment drive signal output to the fluorescent indicator tube (FL601)
78	VKK	—	Power supply terminal (–30V) (for fluorescent indicator tube drive)
79	LED1	O	LED drive signal output terminal (● REC, ❚❚ PAUSE)
80	LED2	O	LED drive signal output terminal Not used (open)

SECTION 8
EXPLODED VIEWS

NOTE:

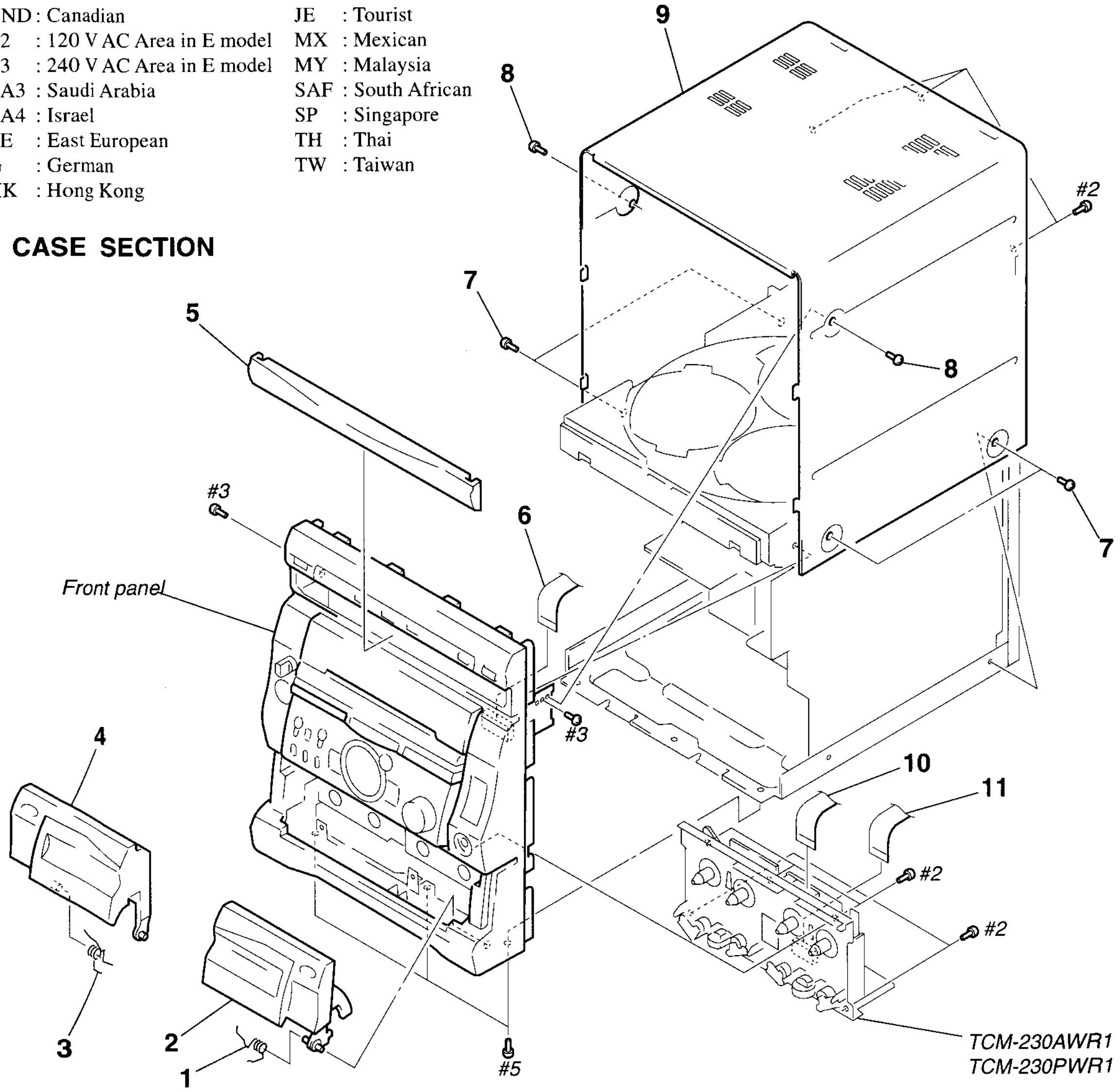
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AUS : Australian
  CND : Canadian
  E2 : 120 V AC Area in E model
  E3 : 240 V AC Area in E model
  EA3 : Saudi Arabia
  EA4 : Israel
  EE : East European
  G : German
  HK : Hong Kong
  IA : Indonesian
  JE : Tourist
  MX : Mexican
  MY : Malaysia
  SAF : South African
  SP : Singapore
  TH : Thai
  TW : Taiwan

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

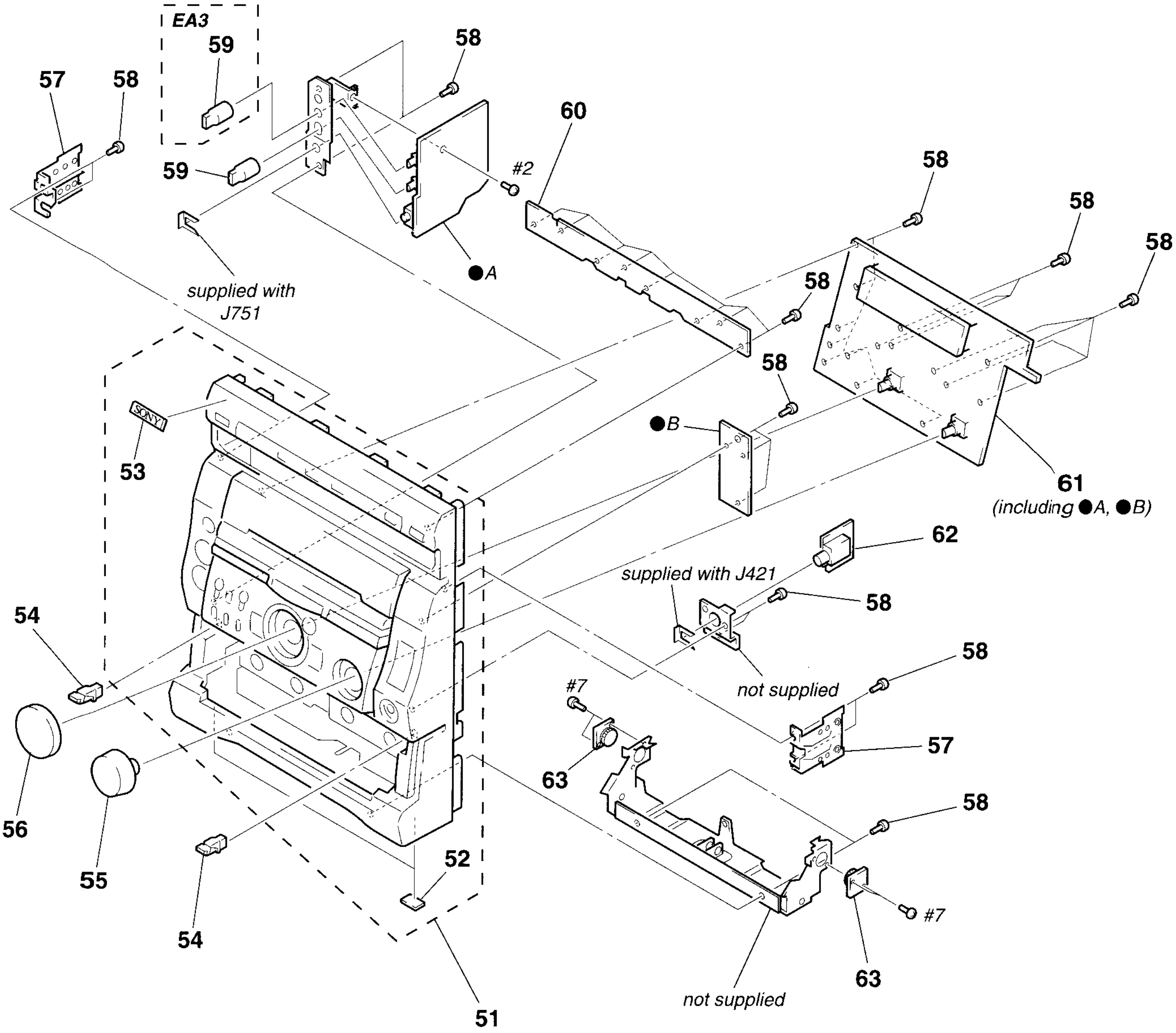
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) CASE SECTION



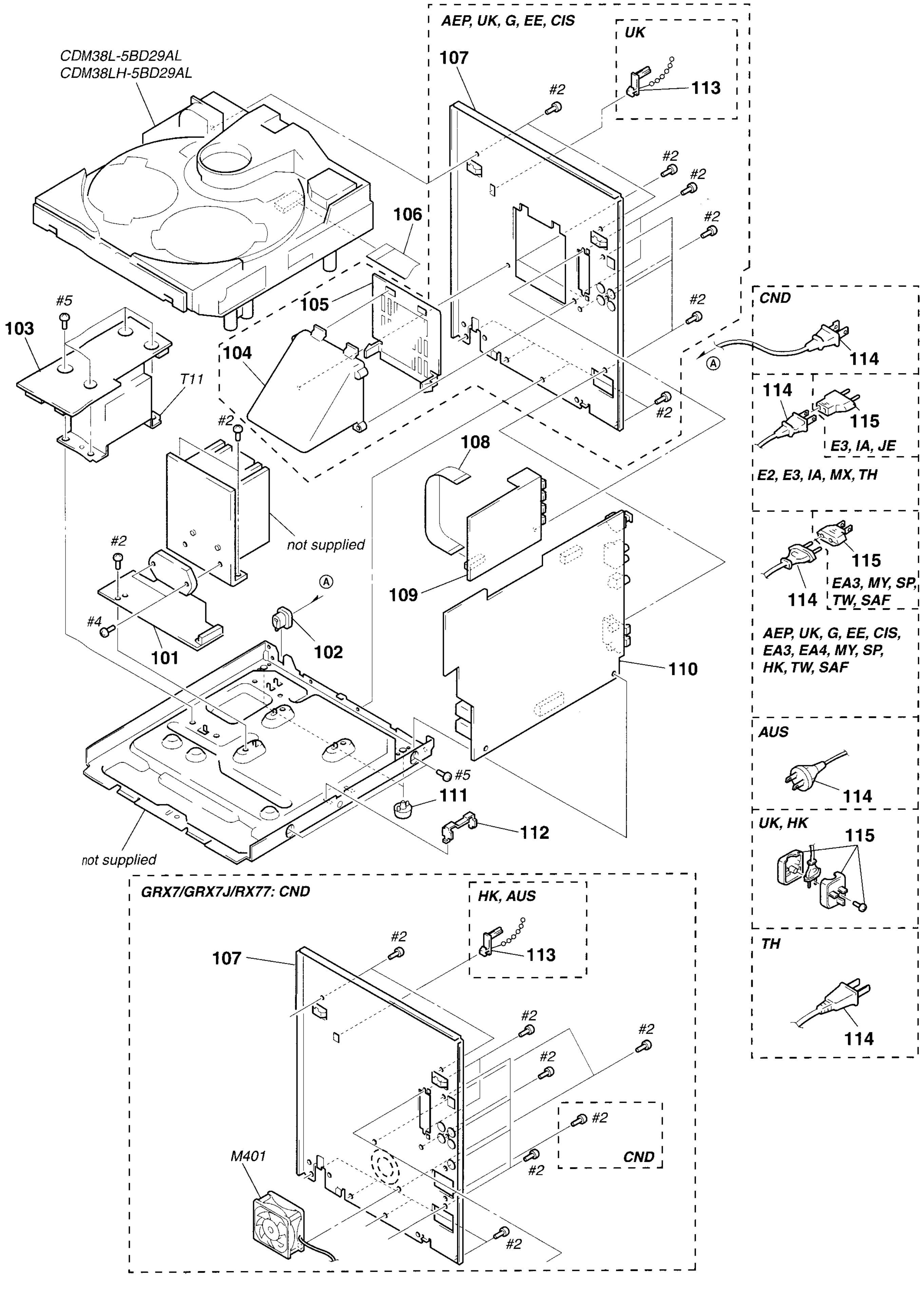
Ref. No.	Part No.	Description	Remark
1	4-996-733-01	SPRING (B DECK)	
2	X-4949-350-1	LID (R) ASSY, CASSETTE (SILVER) (GRX7/GRX7J/RX77: CND)	
2	X-4949-411-1	LID (R) ASSY, CASSETTE (BLACK) (R700)	
2	X-4949-414-1	LID (R) ASSY, CASSETTE (SILVER) (RX77: AEP, G/RX77S)	
3	4-996-732-01	SPRING (A DECK)	
4	X-4949-349-1	LID (L) ASSY, CASSETTE (SILVER) (GRX7/GRX7J/RX77: CND)	
4	X-4949-398-1	LID (L) ASSY, CASSETTE (SILVER) (RX77: AEP, G/RX77S)	
4	X-4949-410-1	LID (L) ASSY, CASSETTE (BLACK) (R700)	
5	4-996-703-21	PANEL, LOADING (SILVER) (CND)	
5	4-996-703-31	PANEL, LOADING (SILVER) (GRX7)	
5	4-996-703-81	PANEL, LOADING (SILVER) (GRX7J)	
5	4-998-222-01	PANEL, LOADING (SILVER) (RX77: AEP, G, EE)	
5	4-998-222-11	PANEL, LOADING (SILVER) (RX77S)	
5	4-998-222-21	PANEL, LOADING (BLACK) (R700)	
6	1-769-984-11	WIRE (FLAT TYPE) (13 CORE) (20CM)	
7	3-363-099-01	SCREW (CASE 3 TP2) (3X8) (BLACK) (R700)	
7	3-363-099-11	SCREW (CASE 3 TP2) (3X8) (SILVER) (GRX7/GRX7J/RX77/RX77S)	
8	3-363-099-41	SCREW (CASE 3 TP2) (3X12) (BLACK) (R700)	
8	3-363-099-71	SCREW (CASE 3 TP2) (3X12)(SILVER) (GRX7/GRX7J/RX77/RX77S)	
* 9	4-996-728-01	CASE (SILVER) (EXCEPT IA, R700)	
* 9	4-996-728-21	CASE (SILVER) (IA)	
* 9	4-996-728-81	CASE (BLACK) (R700)	
10	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)	
11	1-773-025-11	WIRE (FLAT TYPE) (15 CORE) (30CM)	

(2) FRONT PANEL SECTION


EA3
59
57
58
58
59
60
#2
supplied with J751
●A
58
58
58
58
58
●B
53
61
(including ●A, ●B)
62
supplied with J421
58
54
58
not supplied
#7
57
63
56
58
55
52
#7
54
63
not supplied
51

Ref. No.	Part No.	Description	Remark
51	X-4949-343-1	PANEL ASSY, FRONT (SILVER)	(RX77: AEP, G/RX77S: UK)
51	X-4949-385-1	PANEL ASSY, FRONT (SILVER)	(EXCEPT AEP, UK, G, EE, CIS, EA3)
51	X-4949-386-1	PANEL ASSY, FRONT (SILVER) (EA3)	
51	X-4949-391-1	PANEL ASSY, FRONT (BLACK) (R700)	
51	X-4949-604-1	PANEL ASSY, FRONT (SILVER) (EE, CIS)	
52	4-930-336-61	FOOT (FELT)	
53	4-962-708-11	EMBLEM (4-A), SONY	
54	4-995-081-01	LATCH, DC	
55	4-996-722-01	KNOB (VOL)	
56	4-996-721-01	KNOB (JOG-U4)	
* 57	4-996-716-01	HOLDER (CDM)	
58	4-951-620-01	SCREW (2.6X8), +BVTP	
59	4-986-893-01	KNOB (MICROPHONE) (BLACK) (R700)	
59	4-986-893-51	KNOB (MICROPHONE) (SILVER)	(EXCEPT R700)
* 60	1-668-206-11	CD-SW BOARD	
* 61	A-4403-990-A	PANEL BOARD, COMPLETE (EE, CIS)	
* 61	A-4407-013-A	PANEL BOARD, COMPLETE	(EXCEPT AEP, UK, G, EE, CIS, EA3)
* 61	A-4407-015-A	PANEL BOARD, COMPLETE (EA3)	
* 61	A-4407-998-A	PANEL BOARD, COMPLETE (AEP, UK, G)	
* 62	1-668-209-11	HP BOARD	
63	3-973-975-11	DAMPER, OIL	

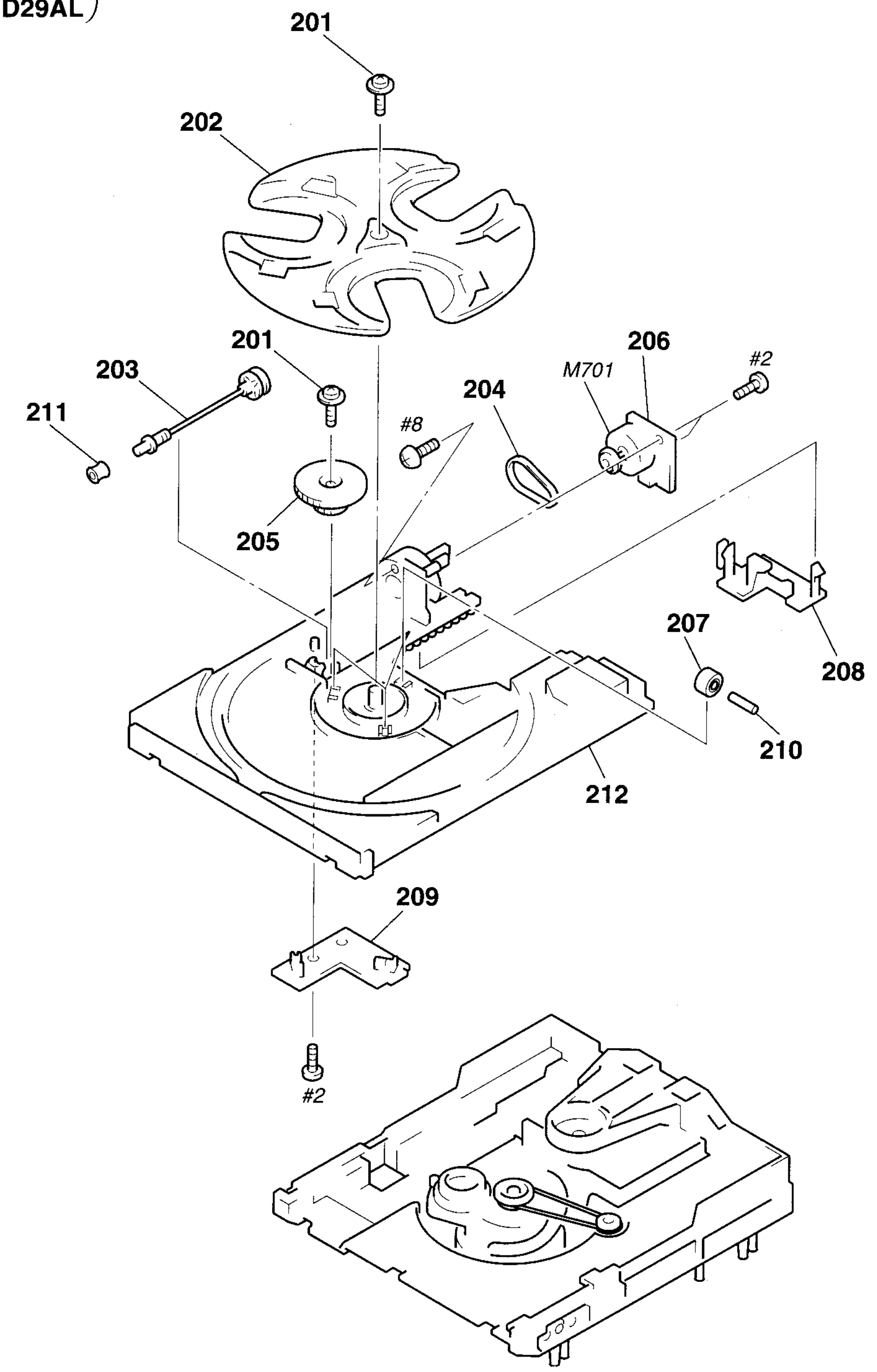
(3) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 101	A-4403-998-A	POWER AMP BOARD, COMPLETE (AEP, UK, G, EE, CIS)	
* 101	A-4407-010-A	POWER AMP BOARD, COMPLETE (EXCEPT CND, AEP, UK, G, EE, CIS)	
* 101	A-4407-027-A	POWER AMP BOARD, COMPLETE (CND)	
* 102	3-703-244-00	BUSHING (2104), CORD (CND, AEP, UK, G, EE, CIS, EA3, MY, SP, HK, TW, SAF, AUS)	
102	3-703-571-11	BUSHING (S) (4516), CORD (E2, E3, EA4, TH, MX, JE)	
102	4-966-266-01	BUSHING (S) (FBS002), CORD (IA)	
* 103	1-668-208-11	TRANSFORMER BOARD	
104	4-996-736-01	DUCT (A) (AEP, UK, G, EE, CIS)	
105	4-996-701-01	DUCT (B) (AEP, UK, G, EE, CIS)	
106	1-783-570-11	WIRE (FLAT TYPE) (19 CORE) (24CM)	
* 107	4-996-843-01	PANEL, BACK (CND)	
* 107	4-996-843-61	PANEL, BACK (EA4, TH)	
* 107	4-996-844-01	PANEL, BACK (E2, E3)	
* 107	4-996-844-11	PANEL, BACK (MY, SP, SAF)	
* 107	4-996-844-21	PANEL, BACK (GRX7: EA3, TW)	
* 107	4-996-844-31	PANEL, BACK (HK)	
* 107	4-996-844-41	PANEL, BACK (AUS)	
* 107	4-996-844-51	PANEL, BACK (MX)	
* 107	4-996-844-71	PANEL, BACK (IA)	
* 107	4-996-844-81	PANEL, BACK (GRX7J)	
* 107	4-996-845-01	PANEL, BACK (RX77S: UK)	
* 107	4-996-845-11	PANEL, BACK (RX77S: EE, CIS)	
* 107	4-996-845-21	PANEL, BACK (R700)	
* 107	4-996-845-31	PANEL, BACK (RX77: AEP, G)	
* 107	4-996-845-41	PANEL, BACK (RX77: EE)	
108	1-769-976-11	WIRE (FLAT TYPE) (13 CORE) (14CM) (CND, E2, EA4, TH, MX, AUS)	
108	1-773-008-11	WIRE (FLAT TYPE) (15 CORE) (14CM) (GRX7: E3, EA3, MY, SP, IA, HK, TW, SAF/ GRX7J/R700/RX77: AEP, G, EE, RX77S)	
109	1-233-544-11	ENCAPSULATED COMPONENT (CND)	
109	1-233-545-11	ENCAPSULATED COMPONENT (E2, EA4, TH, MX, AUS)	
109	1-233-546-11	ENCAPSULATED COMPONENT (E3, EA3, MY, SP, IA, HK, TW, SAF)	
109	1-693-385-11	TUNER (JE)	
* 109	A-4303-588-A	TCB BOARD, COMPLETE (EE, CIS)	
* 109	A-4303-590-A	TCB BOARD, COMPLETE (AEP, UK, G)	
* 110	A-4403-987-A	MAIN BOARD, COMPLETE (EE, CIS)	
* 110	A-4403-992-A	MAIN BOARD, COMPLETE (AEP, UK, G)	
* 110	A-4407-007-A	MAIN BOARD, COMPLETE (GRX7: E3, EA3, MY, SP, HK, TW, SAF)	
* 110	A-4407-017-A	MAIN BOARD, COMPLETE (E2, MX)	
* 110	A-4407-021-A	MAIN BOARD, COMPLETE (AUS)	
* 110	A-4407-024-A	MAIN BOARD, COMPLETE (CND)	
* 110	A-4407-032-A	MAIN BOARD, COMPLETE (EA4, TH)	
* 110	A-4407-040-A	MAIN BOARD, COMPLETE (IA)	
* 110	A-4407-048-A	MAIN BOARD, COMPLETE (JE)	
* 110	A-4407-056-A	MAIN BOARD, COMPLETE (GRX7J: EA3)	
111	4-965-822-01	FOOT	
* 112	4-988-533-01	HOLDER, PWB	
113	4-956-370-12	BAND, PLUG FIXED (UK, HK, AUS)	
⚠114	1-575-651-11	CORD, POWER (EA3, EA4, MY, SP, HK, TW, SAF)	
⚠114	1-575-653-11	CORD, POWER (E2, E3, IA, MX, JE)	
⚠114	1-690-608-11	CORD, POWER (AUS)	
⚠114	1-690-609-21	CORD, POWER (CND)	
⚠114	1-751-326-31	CORD, POWER (TH)	
⚠114	1-775-787-71	CORD, POWER (AEP, UK, G, EE, CIS)	
⚠115	1-569-007-11	ADAPTOR, CONVERSION 2P (E3, IA, JE)	
⚠115	1-569-008-11	ADAPTOR, CONVERSION 2P (EA3, MY, SP, TW, SAF)	
⚠115	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK, HK)	
M401	1-698-792-11	FAN, DC (GRX7/GRX7J/RX77: CND)	
⚠T11	1-431-659-11	TRANSFORMER, POWER (CND)	
⚠T11	1-431-660-11	TRANSFORMER, POWER (AEP, UK, G, EE, CIS)	
⚠T11	1-431-661-11	TRANSFORMER, POWER (GRX7/GRX7J)	

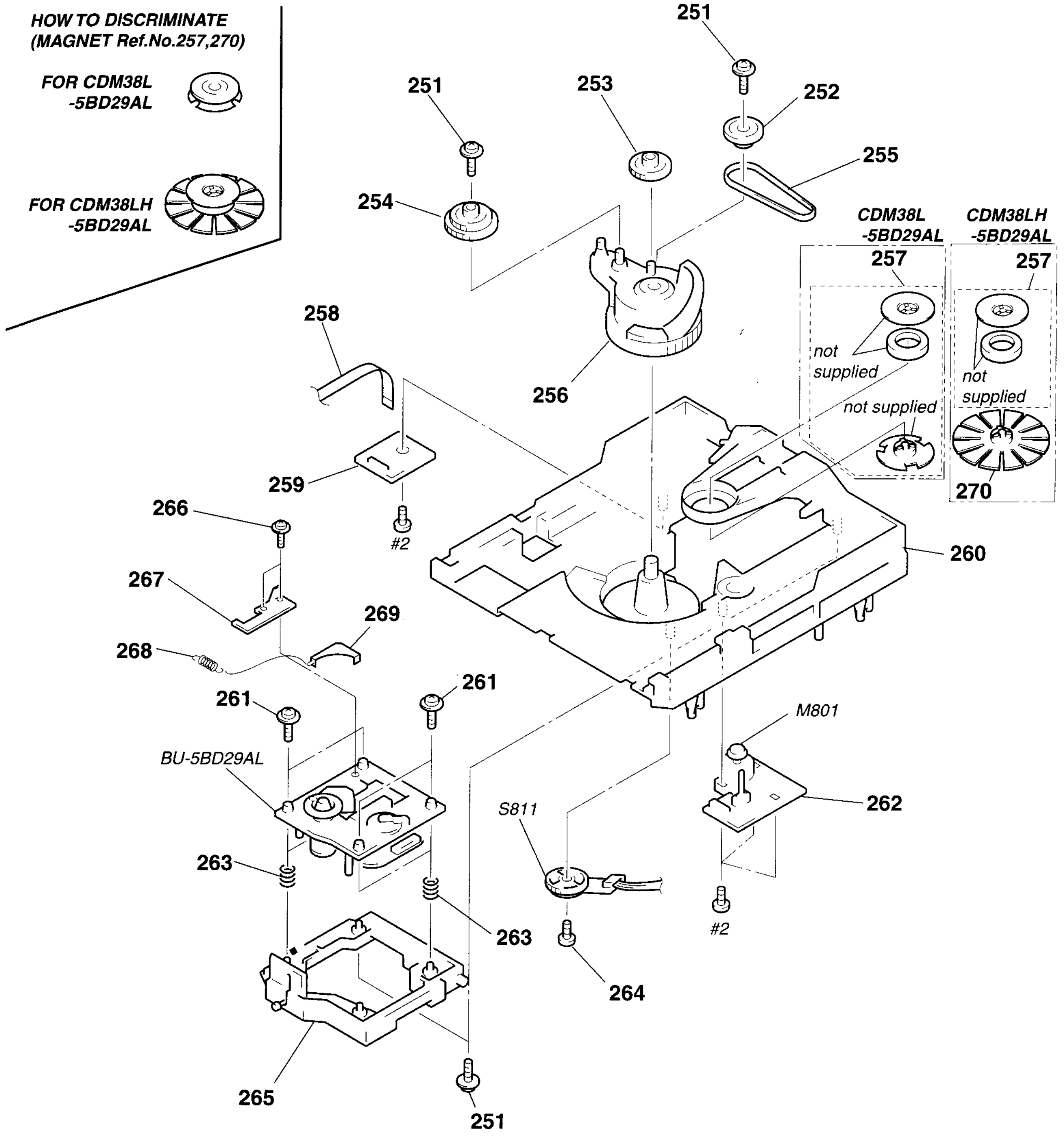
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

(4) CD MECHANISM DECK SECTION-1
(CDM38L-5BD29AL
CDM38LH-5BD29AL)


201
202
201
203
211
205
204
#8
M701
206
#2
207
208
210
212
209
#2

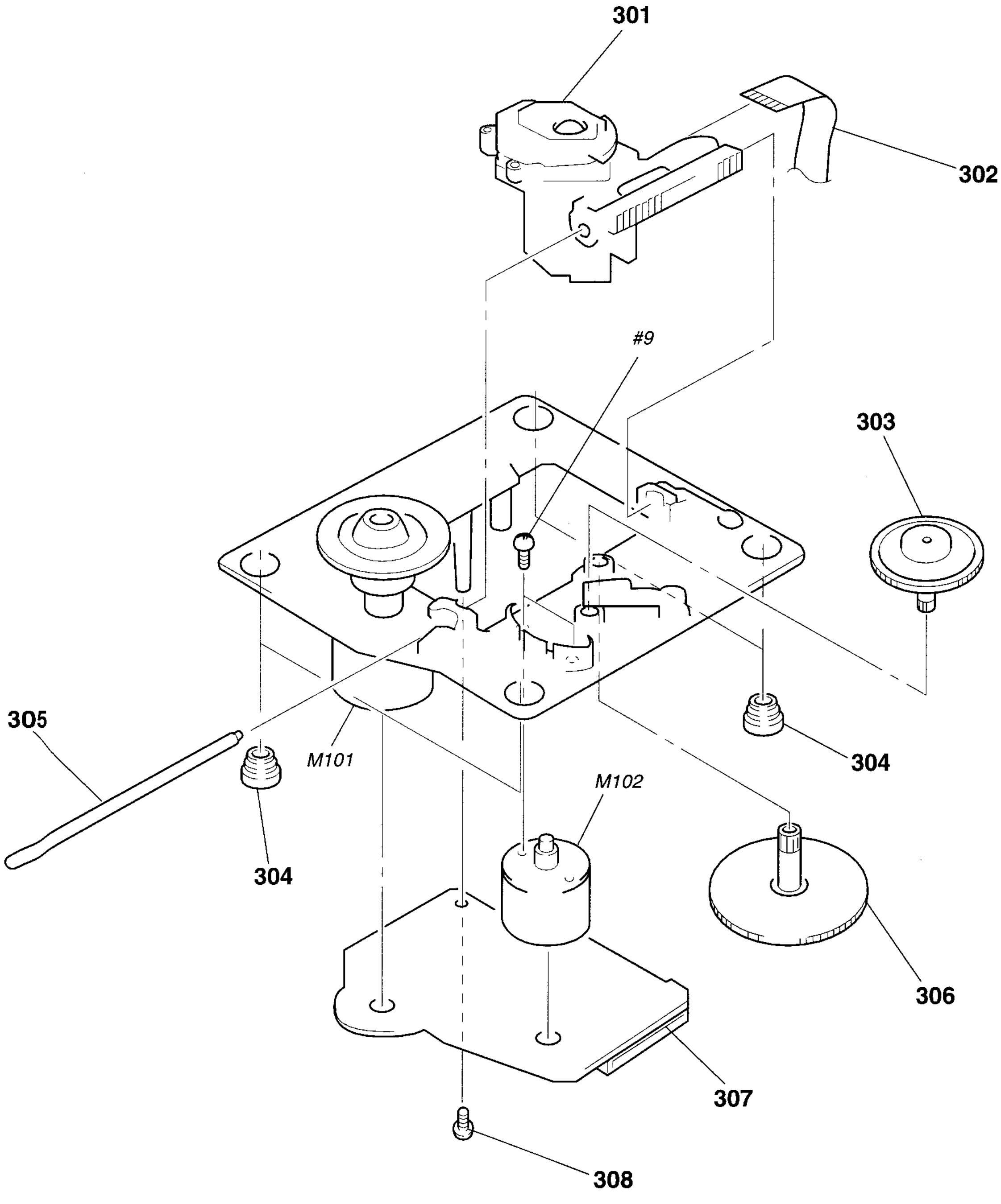
Ref. No.	Part No.	Description	Remark
201	4-981-789-11	BRACKET (2), YOKE	
202	4-977-945-01	TRAY (TURN)	
203	X-4946-665-1	SHAFT ASSY, WORM	
204	4-977-943-01	BELT (TURN) (1.2)	
205	4-977-956-01	WHEEL, WORM	
* 206	1-658-577-11	MOTOR (TURN) BOARD	
207	4-988-162-01	ROLLER	
208	4-977-941-01	BEARING (WORM)	
* 209	1-658-576-11	SENSOR BOARD	
210	4-934-376-01	SHAFT (ROLLER)	
211	4-981-187-01	COLLAR (WORM)	
212	4-977-944-01	TRAY (SLIDE)	
M701	A-4672-004-A	MOTOR ASSY (TURN)	

(5) CD MECHANISM DECK SECTION-2
(CDM38L-5BD29AL
CDM38LH-5BD29AL)


HOW TO DISCRIMINATE
(MAGNET Ref.No.257,270)
FOR CDM38L
-5BD29AL
FOR CDM38LH
-5BD29AL
251
251
253
252
255
254
CDM38L
-5BD29AL
CDM38LH
-5BD29AL
257
257
not
supplied
not
supplied
not supplied
270
258
256
259
#2
266
260
267
269
268
261
261
M801
BU-5BD29AL
S811
262
263
263
264
#2
265
251

Ref. No.	Part No.	Description	Remark
251	4-917-583-71	BRACKET, YOKE	
252	4-977-954-01	PULLEY (SL)	
253	4-977-953-01	GEAR (SL-A)	
254	4-977-955-01	GEAR (SL-B)	
255	4-977-942-01	BELT (SL) (1.4)	
256	X-4946-667-1	CAM ASSY, BU	
* 257	1-452-879-11	MAGNET (CDM38L-5BD29AL)	
257	1-452-925-21	MAGNET ASSY (CDM38LH-5BD29AL)	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
* 259	1-658-575-11	CONNECTOR BOARD	
* 260	X-4946-668-1	CHASSIS (CDM) ASSY	
261	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
* 262	1-658-578-11	MOTOR (SLIDE) BOARD	
263	4-982-447-01	SPRING (BU), COMPRESSION	
264	4-951-620-41	SCREW (2.6), +BVTP	
* 265	X-4946-666-1	HOLDER (BU) ASSY	
266	4-989-494-01	SCREW (SLIDER), STEP	
267	4-989-492-11	SLIDER (38)	
268	4-989-819-02	SPRING, TENSION	
269	4-989-491-21	COVER, LENS	
270	4-933-142-11	PULLEY (L), PRESS (CDM38LH-5BD29AL)	
M801	A-4672-004-A	MOTOR ASSY (SLIDE)	
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	

(6) BASE UNIT SECTION
(BU-5BD29AL)



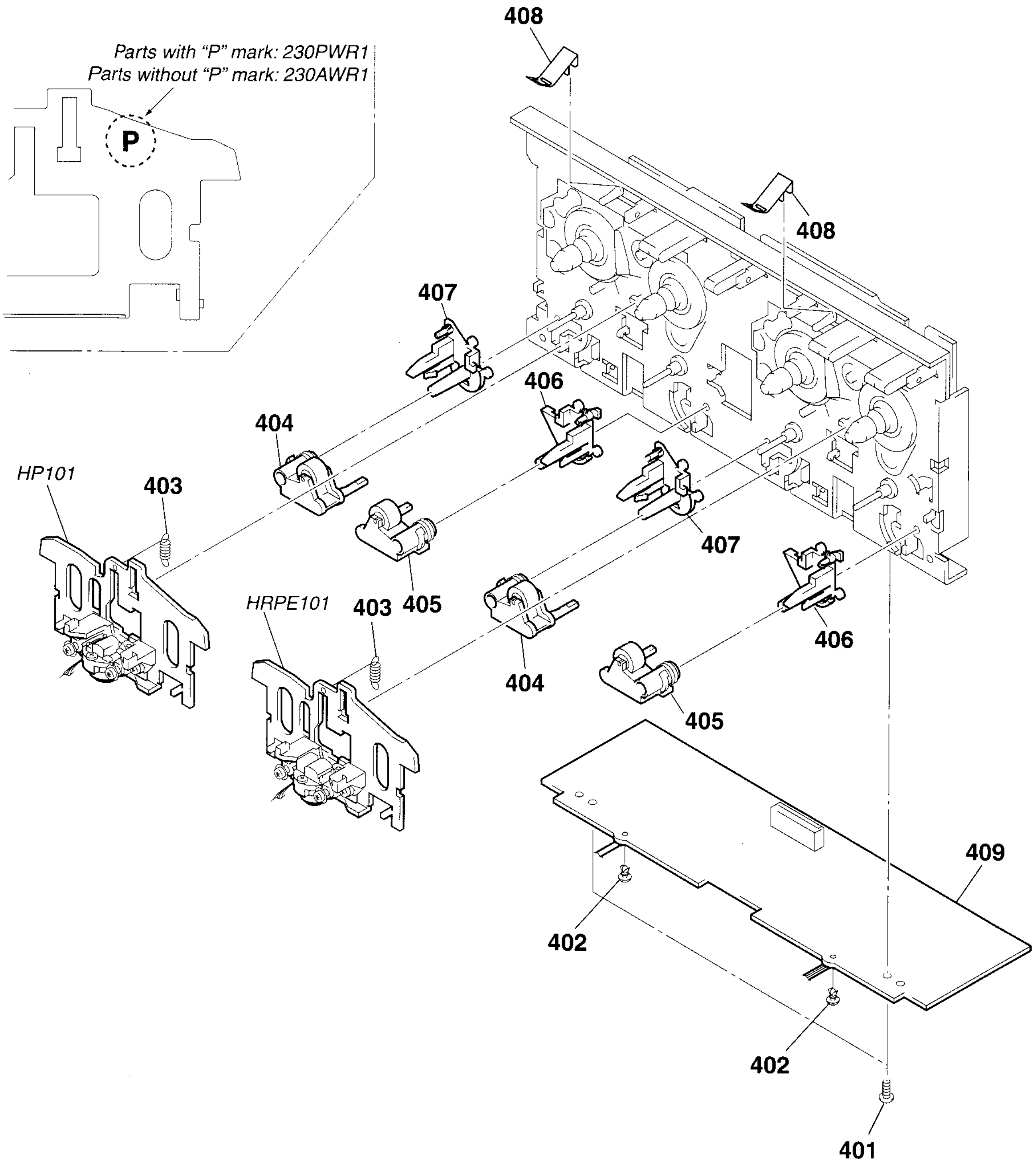
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
⚠301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
303	4-917-567-21	GEAR (M)	
304	4-951-940-01	INSULATOR (BU)	
305	4-917-565-01	SHAFT, SLED	

Ref. No.	Part No.	Description	Remark
306	4-917-564-01	GEAR (P), FLATNESS	
* 307	A-4699-522-A	BD BOARD, COMPLETE	
308	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

(7) TAPE MECHANISM DECK SECTION-1
(TCM-230AWR1 / TCM-230PWR1)

***NOTE:** *Two types of parts which are not interchangeable are available for the Head deck (A) ASSY and Head deck (B) ASSY.*
When replacing the parts, refer to the following figure, and use the appropriate part

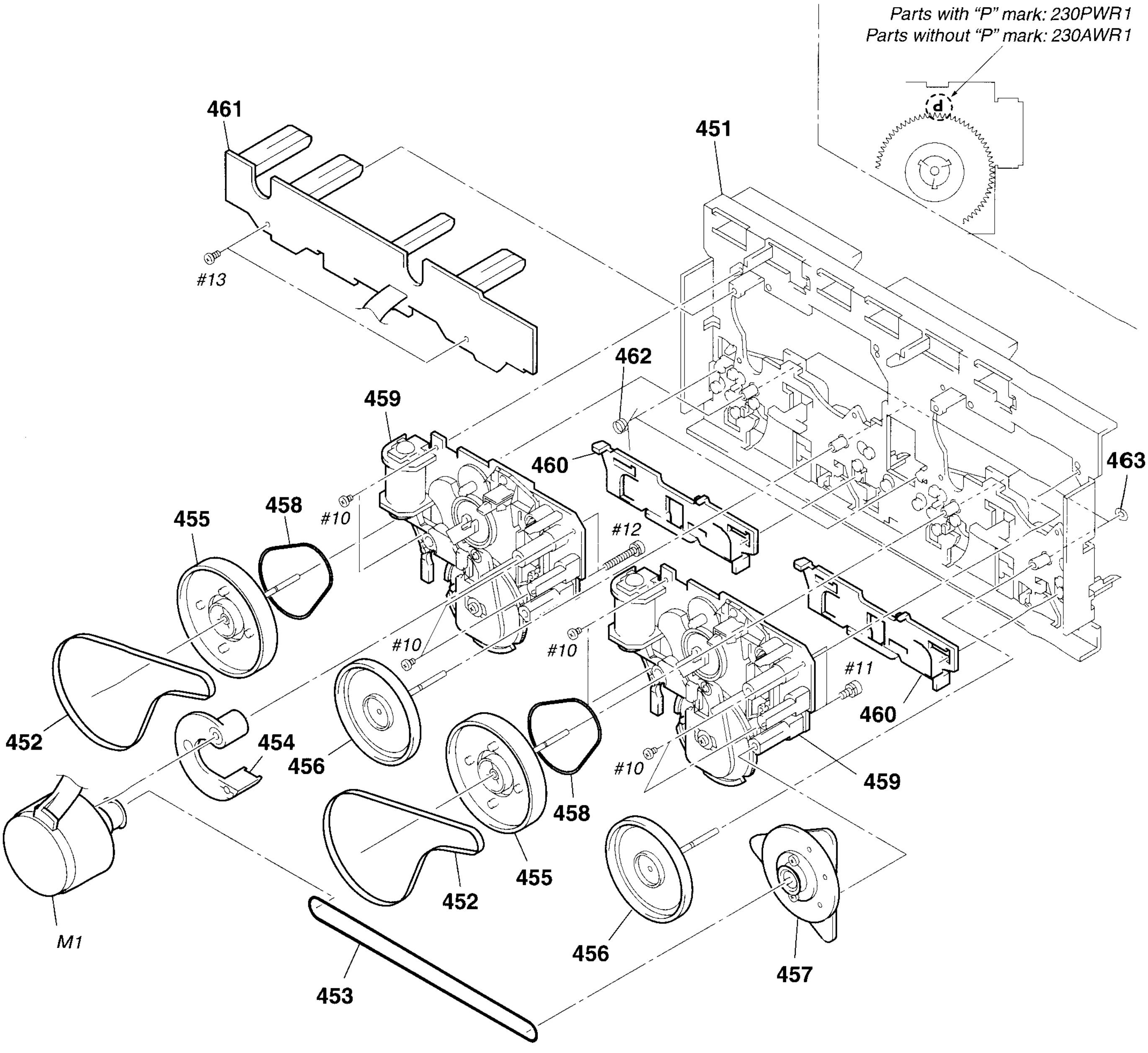

408
Parts with "P" mark: 230PWR1
Parts without "P" mark: 230AWR1
P
408
407
406
404
HP101
403
407
HRPE101
403
405
404
406
405
409
402
402
401

Ref. No.	Part No.	Description	Remark
401	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
402	3-911-116-21	RIVET, PUSH	
403	3-016-574-01	SPRING (HEAD),TENSION	
404	X-3374-156-2	PINCH LEVER (REV) ASSY	
405	X-3374-155-2	PINCH LEVER (FWD) ASSY	
406	3-016-564-01	BASE (PINCH LEVER FWD)	
407	3-016-565-01	BASE (PINCH LEVER REV)	
408	3-016-567-02	SPRING (CASSETTE), LEAF	
* 409	A-2007-731-A	AUDIO BOARD, COMPLETE	
HP101	A-2056-681-A	DECK (A) ASSY, HEAD (230AWR1) (*NOTE)	
HP101	A-2056-683-A	DECK (A) ASSY, HEAD (230PWR1) (*NOTE)	
HRPE101	A-2056-682-A	DECK (B) ASSY, HEAD (230AWR1) (*NOTE)	
HRPE101	A-2056-684-A	DECK (B) ASSY, HEAD (230PWR1) (*NOTE)	

(8) TAPE MECHANISM DECK SECTION-2

(TCM-230AWR1
TCM-230PWR1)

***NOTE:** *Two types of parts which are not interchangeable are available for the mechanical block assembly. When replacing the parts, refer to the following figure, and use the appropriate part.*


Parts with "P" mark: 230PWR1
Parts without "P" mark: 230AWR1

Ref. No.	Part No.	Description	Remark
* 451	X-3374-214-1	CHASSIS ASSY, MAIN	
452	3-016-570-01	BELT (CAPSTAN)	
453	3-016-569-01	BELT (TENSION)	
454	3-017-360-01	BRACKET (MOTOR)	
455	X-3374-234-1	FLYWHEEL (FWD) ASSY	
456	X-3374-235-1	FLYWHEEL (REV) ASSY	
457	X-3374-238-1	PULLEY ASSY, TENSION	
458	3-024-405-01	BELT (FR)	
459	A-2004-629-A	MECHANICAL BLOCK ASSY (230AWR1)	(*NOTE)
459	A-2004-630-A	MECHANICAL BLOCK ASSY (230PWR1)	(*NOTE)
460	3-016-566-01	SLIDER, REVERSE	
* 461	A-2007-732-A	LEAF SW BOARD, COMPLETE	
462	3-016-575-01	SPRING, TORSION	
463	3-019-208-01	WASHER, STOPPER	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	

SECTION 9
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AUS : Australian
  CND : Canadian
  E2 : 120V AC Area in E model
  E3 : 240V AC Area in E model
  EA3 : Saudi Arabia
  EA4 : Israel
  EE : East European
  G : German
  HK : Hong Kong
  IA : Indonesian
  JE : Tourist
  MX : Mexican
  MY : Malaysia
  SAF : South African
  SP : Singapore
  TH : Thai
  TW : Taiwan
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-2007-731-A	AUDIO BOARD, COMPLETE			
		**********************			
		< CAPACITOR >			
C301	1-162-289-31	CERAMIC	390PF	10%	50V
C302	1-126-968-11	ELECT	100uF	20%	6.3V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-130-483-00	MYLAR	0.01uF	5%	50V
C305	1-107-715-11	ELECT	22uF	20%	16V
C311	1-162-289-31	CERAMIC	390PF	10%	50V
C313	1-162-282-31	CERAMIC	100PF	10%	50V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-126-233-11	ELECT	22uF	20%	50V
C331	1-137-427-11	FILM	120PF	5%	50V
C332	1-162-288-31	CERAMIC	330PF	10%	50V
C333	1-162-209-31	CERAMIC	27PF	5%	50V
C401	1-162-289-31	CERAMIC	390PF	10%	50V
C402	1-126-968-11	ELECT	100uF	20%	6.3V
C403	1-162-282-31	CERAMIC	100PF	10%	50V
C404	1-130-483-00	MYLAR	0.01uF	5%	50V
C405	1-107-715-11	ELECT	22uF	20%	16V
C411	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-130-487-00	MYLAR	0.022uF	5%	50V
C415	1-126-233-11	ELECT	22uF	20%	50V
C431	1-137-427-11	FILM	120PF	5%	50V
C432	1-162-288-31	CERAMIC	330PF	10%	50V
C433	1-162-209-31	CERAMIC	27PF	5%	50V
C601	1-104-396-11	ELECT	10uF	20%	16V
C602	1-104-396-11	ELECT	10uF	20%	16V
C611	1-104-396-11	ELECT	10uF	20%	16V
C612	1-104-396-11	ELECT	10uF	20%	16V
C621	1-137-150-11	FILM	0.01uF	5%	100V
C622	1-126-961-11	ELECT	2.2uF	20%	50V
C623	1-136-155-00	FILM	0.015uF	5%	50V
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V
C627	1-124-903-11	ELECT	1uF	20%	50V
C628	1-136-153-00	FILM	0.01uF	5%	50V

Ref. No.	Part No.	Description			Remark
C642	1-104-664-11	ELECT	47uF	20%	16V
		< CONNECTOR >			
CN601	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P			
		< IC >			
IC601	8-759-111-44	IC UPC4570C-1			
IC602	8-759-143-54	IC UPC1330HA			
IC611	8-759-111-44	IC UPC4570C-1			
		< COIL >			
L331	1-410-780-11	INDUCTOR	27mH		
L431	1-410-780-11	INDUCTOR	27mH		
L601	1-414-193-41	INDUCTOR, MICRO	22uH		
L602	1-414-193-41	INDUCTOR, MICRO	22uH		
		< TRANSISTOR >			
Q621	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q622	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q623	8-729-801-93	TRANSISTOR 2SD1387			
		< RESISTOR >			
R301	1-247-881-00	CARBON	120K	5%	1/4W
R302	1-249-409-11	CARBON	220	5%	1/4W
R303	1-249-433-11	CARBON	22K	5%	1/4W
R304	1-247-889-00	CARBON	270K	5%	1/4W
R305	1-247-858-11	CARBON	13K	5%	1/4W
R311	1-247-881-00	CARBON	120K	5%	1/4W
R312	1-247-807-31	CARBON	100	5%	1/4W
R314	1-247-882-11	CARBON	130K	5%	1/4W
R315	1-247-850-11	CARBON	6.2K	5%	1/4W
R331	1-249-430-11	CARBON	12K	5%	1/4W
R401	1-247-881-00	CARBON	120K	5%	1/4W
R402	1-249-409-11	CARBON	220	5%	1/4W
R403	1-249-433-11	CARBON	22K	5%	1/4W
R404	1-247-889-00	CARBON	270K	5%	1/4W
R405	1-247-858-11	CARBON	13K	5%	1/4W
R411	1-247-881-00	CARBON	120K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R412	1-247-807-31	CARBON	100	5%	1/4W
R414	1-247-882-11	CARBON	130K	5%	1/4W
R415	1-247-850-11	CARBON	6.2K	5%	1/4W
R431	1-249-430-11	CARBON	12K	5%	1/4W
R601	1-249-409-11	CARBON	220	5%	1/4W
R602	1-249-409-11	CARBON	220	5%	1/4W
R608	1-249-409-11	CARBON	220	5%	1/4W
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W
R612	1-249-409-11	CARBON	220	5%	1/4W
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K
RV341	1-241-768-11	RES, ADJ, CARBON 220K
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K
RV441	1-241-768-11	RES, ADJ, CARBON 220K

< TRANSFORMER >

Ref. No.	Part No.	Description
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION

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Ref. No.	Part No.	Description
*	A-4699-522-A	BD BOARD, COMPLETE

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< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C107	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C113	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C118	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C120	1-124-779-00	ELECT CHIP	10uF	20%	16V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C127	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-164-346-11	CERAMIC CHIP	1uF		16V
C140	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C161	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C162	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C163	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C164	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C165	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C166	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C167	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C168	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C169	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C170	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C171	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C173	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C175	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C176	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C177	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C178	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C179	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C181	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C182	1-126-393-11	ELECT CHIP	33uF	20%	10V
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C185	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C188	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C189	1-163-235-11	CERAMIC CHIP	22PF	5%	50V

< CONNECTOR >

Ref. No.	Part No.	Description
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P
CNU102	1-778-874-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P

< FERRITE BEAD >

Ref. No.	Part No.	Description
FB101	1-414-234-11	INDUCTOR CHIP 0UH
FB103	1-414-234-11	INDUCTOR CHIP 0UH

< IC >

Ref. No.	Part No.	Description
IC101	8-752-080-62	IC CXA1992AR
IC102	8-759-429-32	IC BA5941FP-E2
IC103	8-752-378-66	IC CXD2519Q

< JUMPER RESISTOR >

Ref. No.	Part No.	Description	
JW101	1-216-295-91	SHORT	0
JW104	1-216-295-91	SHORT	0

< TRANSISTOR >

Ref. No.	Part No.	Description
Q101	8-729-010-08	TRANSISTOR MSB710-R

< RESISTOR >

Ref. No.	Part No.	Description			Remark
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R104	1-216-093-00	METAL CHIP	68K	5%	1/10W
R105	1-216-088-00	METAL CHIP	43K	5%	1/10W
R106	1-216-088-00	METAL CHIP	43K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
R107	1-216-088-00	METAL CHIP	43K	5%	1/10W
R108	1-216-088-00	METAL CHIP	43K	5%	1/10W
R109	1-216-093-00	METAL CHIP	68K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R118	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R119	1-216-085-00	METAL CHIP	33K	5%	1/10W
R120	1-216-089-91	RES, CHIP	47K	5%	1/10W
R121	1-216-114-00	RES, CHIP	510K	5%	1/10W
R122	1-216-097-91	RES, CHIP	100K	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R126	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R127	1-216-089-91	RES, CHIP	47K	5%	1/10W
R128	1-216-098-00	METAL CHIP	110K	5%	1/10W
R129	1-216-025-91	RES, CHIP	100	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R138	1-216-025-91	RES, CHIP	100	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
R159	1-216-121-91	RES, CHIP	1M	5%	1/10W
R161	1-216-097-91	RES, CHIP	100K	5%	1/10W
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R163	1-216-121-91	RES, CHIP	1M	5%	1/10W
R164	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R165	1-216-049-91	RES, CHIP	1K	5%	1/10W
R166	1-216-073-00	METAL CHIP	10K	5%	1/10W
R167	1-216-081-00	METAL CHIP	22K	5%	1/10W
R168	1-216-073-00	METAL CHIP	10K	5%	1/10W
R169	1-216-079-00	METAL CHIP	18K	5%	1/10W
R170	1-216-081-00	METAL CHIP	22K	5%	1/10W
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R172	1-216-079-00	METAL CHIP	18K	5%	1/10W
R173	1-216-025-91	RES, CHIP	100	5%	1/10W
R174	1-216-033-00	METAL CHIP	220	5%	1/10W
R175	1-216-025-91	RES, CHIP	100	5%	1/10W
R176	1-216-025-91	RES, CHIP	100	5%	1/10W
R177	1-216-025-91	RES, CHIP	100	5%	1/10W
R178	1-216-025-91	RES, CHIP	100	5%	1/10W
R179	1-216-025-91	RES, CHIP	100	5%	1/10W
R180	1-216-025-91	RES, CHIP	100	5%	1/10W
R181	1-216-025-91	RES, CHIP	100	5%	1/10W
R188	1-216-037-00	METAL CHIP	330	5%	1/10W
R190	1-216-097-91	RES, CHIP	100K	5%	1/10W
R191	1-216-105-91	RES, CHIP	220K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			

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Ref. No.	Part No.	Description			Remark
*	1-668-206-11	CD-SW BOARD ************			
		< DIODE >			
D631	8-719-056-13	LED SML79423C-TP15 (DISC 1)			
D632	8-719-056-13	LED SML79423C-TP15 (DISC 2)			
D633	8-719-056-13	LED SML79423C-TP15 (DISC 3)			
		< TRANSISTOR >			
Q613	8-729-029-68	TRANSISTOR DTC114TSA			
Q614	8-729-029-68	TRANSISTOR DTC114TSA			
Q615	8-729-029-68	TRANSISTOR DTC114TSA			
		< RESISTOR >			
R656	1-249-418-11	CARBON	1.2K	5%	1/4W
R657	1-249-419-11	CARBON	1.5K	5%	1/4W
R658	1-249-421-11	CARBON	2.2K	5%	1/4W
R659	1-247-843-11	CARBON	3.3K	5%	1/4W
R660	1-249-425-11	CARBON	4.7K	5%	1/4W
R691	1-247-804-11	CARBON	75	5%	1/4W
R692	1-247-804-11	CARBON	75	5%	1/4W
R693	1-247-804-11	CARBON	75	5%	1/4W
R694	1-247-804-11	CARBON	75	5%	1/4W
R695	1-247-804-11	CARBON	75	5%	1/4W
R696	1-247-804-11	CARBON	75	5%	1/4W
		< SWITCH >			
S637	1-771-410-11	SWITCH, KEYBOARD (I/⏻ (POWER))			
S638	1-771-410-11	SWITCH, KEYBOARD (DISC 1)			
S639	1-771-410-11	SWITCH, KEYBOARD (DISC 2)			
S640	1-771-410-11	SWITCH, KEYBOARD (DISC 3)			
S641	1-771-410-11	SWITCH, KEYBOARD (DISC SKIP/EX-CHANGE)			
S642	1-771-410-11	SWITCH, KEYBOARD (⏏)			

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Ref. No.	Part No.	Description			Remark
*	1-658-575-11	CONNECTOR BOARD ****************			
		< CONNECTOR >			
* CN701	1-568-946-11	PIN, CONNECTOR 8P			
CN702	1-750-413-11	CONNECTOR, FFC/FPC 8P			
		< TRANSISTOR >			
Q701	8-729-900-80	TRANSISTOR DTC114ES			
		< RESISTOR >			
R703	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W

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Ref. No.	Part No.	Description			Remark
*	1-668-209-11	HP BOARD			
		*********			
		< CAPACITOR >			
C421	1-162-294-31	CERAMIC	0.001uF	10%	50V
C471	1-162-294-31	CERAMIC	0.001uF	10%	50V
C472	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN109	1-564-521-11	PLUG, CONNECTOR 6P			
		< LEAD >			
EL1	1-690-880-41	LEAD (WITH CONNECTOR)			
		< JACK >			
J421	1-784-224-11	JACK (LARGE TYPE) (PHONES) (GRX7/GRX7J/RX77/RX77S)			
J421	1-784-900-11	JACK (LARGE TYPE) (PHONES) (R700)			

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Ref. No.	Part No.	Description			Remark
*	A-2007-732-A	LEAF SW BOARD, COMPLETE			
		************************			
		< CAPACITOR >			
C1001	1-128-124-11	ELECT	33uF	20%	10V
		< CONNECTOR >			
CN1001	1-568-860-11	SOCKET, CONNECTOR 17P			
CN1001	1-784-459-11	CONNECTOR, FFC/FPC 17P			
		< DIODE >			
D1001	8-719-911-19	DIODE 1SS119			
D1002	8-719-911-19	DIODE 1SS119			
		< CONNECTOR >			
* DM1001	1-784-581-11	HOLDER, CABLE (2.5MM PITCH) 4P			
		< IC >			
IC1001	8-749-014-38	IC PHOTO INTERRUPTER SG-264			
IC1002	8-749-014-38	IC PHOTO INTERRUPTER SG-264			
		< TRANSISTOR >			
Q1001	8-729-029-56	TRANSISTOR DTA144ESA			
Q1001	8-729-900-65	TRANSISTOR DTA144ES			
		< RESISTOR >			
R907	1-247-879-11	CARBON	100K	5%	1/4W
R1001	1-249-409-11	CARBON	220	5%	1/4W
R1002	1-249-409-11	CARBON	220	5%	1/4W
R1003	1-249-414-11	CARBON	560	5%	1/4W
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
R1006	1-247-864-11	CARBON	24K	5%	1/4W
R1007	1-247-856-00	CARBON	11K	5%	1/4W
R1008	1-249-417-11	CARBON	1K	5%	1/4W
		< VARIABLE RESISTOR >			
RV1001	1-241-785-11	RES, ADJ, CARBON 10K			
RV1002	1-241-785-11	RES, ADJ, CARBON 10K			
		< SWITCH >			
S1001	1-570-953-11	SWITCH, PUSH (1 KEY) (A PLAY)			
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (B PLAY)			
S1003	1-771-333-11	SWITCH, LEAF (A HALF)			
S1004	1-771-205-11	SWITCH, LEAF (A 120/70)			
S1005	1-771-205-11	SWITCH, LEAF (REC A)			
S1006	1-771-333-11	SWITCH, LEAF (B HALF)			
S1008	1-771-205-11	SWITCH, LEAF (B 120/70)			
S1009	1-771-205-11	SWITCH, LEAF (REC B)			

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Ref. No.	Part No.	Description			Remark
*	A-4403-987-A	MAIN BOARD, COMPLETE (EE, CIS)			
*	A-4403-992-A	MAIN BOARD, COMPLETE (AEP, UK, G)			
*	A-4407-007-A	MAIN BOARD, COMPLETE (GRX7: E3, EA3, MY, SP, HK, TW, SAF)			
*	A-4407-017-A	MAIN BOARD, COMPLETE (E2, MX)			
*	A-4407-021-A	MAIN BOARD, COMPLETE (AUS)			
*	A-4407-024-A	MAIN BOARD, COMPLETE (CND)			
*	A-4407-032-A	MAIN BOARD, COMPLETE (EA4, TH)			
*	A-4407-040-A	MAIN BOARD, COMPLETE (IA)			
*	A-4407-048-A	MAIN BOARD, COMPLETE (JE)			
*	A-4407-056-A	MAIN BOARD, COMPLETE (GRX7J: EA3)			
		********************			
		< CAPACITOR >			
C101	1-162-286-31	CERAMIC	220PF	10%	50V
C102	1-162-286-31	CERAMIC	220PF	10%	50V
C103	1-164-159-11	CERAMIC	0.1uF		50V
C111	1-137-195-11	FILM	0.56uF	5%	50V
C112	1-136-158-00	FILM	0.027uF	5%	50V
C113	1-136-167-00	FILM	0.15uF	5%	50V
			(GRX7/GRX7J/RX77: CND)		
C114	1-130-480-00	MYLAR	0.0056uF	5%	50V
			(GRX7/GRX7J/RX77: CND)		
C115	1-136-159-00	FILM	0.033uF	5%	50V
C116	1-130-473-00	MYLAR	0.0015uF	5%	50V
C117	1-136-153-00	FILM	0.01uF	5%	50V
			(GRX7/GRX7J/RX77: CND)		
C118	1-110-341-11	MYLAR	330PF	5%	50V
			(GRX7/GRX7J/RX77: CND)		
C119	1-130-479-00	MYLAR	0.0047uF	5%	50V
C120	1-130-477-00	MYLAR	0.0033uF	5%	50V
C121	1-126-964-11	ELECT	10uF	20%	50V
C122	1-162-291-31	CERAMIC	560PF	10%	50V
C123	1-136-165-00	FILM	0.1uF	5%	50V
C124	1-136-165-00	FILM	0.1uF	5%	50V
C125	1-126-964-11	ELECT	10uF	20%	50V
C131	1-126-967-11	ELECT	47uF	20%	16V
C132	1-126-967-11	ELECT	47uF	20%	16V
C133	1-164-159-11	CERAMIC	0.1uF		50V
C134	1-164-159-11	CERAMIC	0.1uF		50V
C135	1-126-964-11	ELECT	10uF	20%	50V
C136	1-164-159-11	CERAMIC	0.1uF		50V

MAIN

Ref. No.	Part No.	Description			Remark
C141	1-126-959-11	ELECT	0.47uF	20%	50V
C151	1-162-286-31	CERAMIC	220PF	10%	50V
C152	1-162-286-31	CERAMIC	220PF	10%	50V
C161	1-137-195-11	FILM	0.56uF	5%	50V
C162	1-136-158-00	FILM	0.027uF	5%	50V
C163	1-136-167-00	FILM	0.15uF	5%	50V (GRX7/GRX7J/RX77: CND)
C164	1-130-480-00	MYLAR	0.0056uF	5%	50V (GRX7/GRX7J/RX77: CND)
C165	1-136-159-00	FILM	0.033uF	5%	50V
C166	1-130-473-00	MYLAR	0.0015uF	5%	50V
C167	1-136-153-00	FILM	0.01uF	5%	50V (GRX7/GRX7J/RX77: CND)
C168	1-110-341-11	MYLAR	330PF	5%	50V (GRX7/GRX7J/RX77: CND)
C169	1-130-479-00	MYLAR	0.0047uF	5%	50V
C170	1-130-477-00	MYLAR	0.0033uF	5%	50V
C171	1-126-964-11	ELECT	10uF	20%	50V
C172	1-162-291-31	CERAMIC	560PF	10%	50V
C173	1-136-165-00	FILM	0.1uF	5%	50V
C174	1-136-165-00	FILM	0.1uF	5%	50V
C175	1-126-964-11	ELECT	10uF	20%	50V
C176	1-136-495-11	FILM	0.068uF	5%	50V
C177	1-136-153-00	FILM	0.01uF	5%	50V
C191	1-126-964-11	ELECT	10uF	20%	50V (GRX7/GRX7J/RX77: CND)
C192	1-162-292-31	CERAMIC	680PF	10%	50V (GRX7/GRX7J/RX77: CND)
C193	1-126-964-11	ELECT	10uF	20%	50V (GRX7/GRX7J/RX77: CND)
C194	1-162-286-31	CERAMIC	220PF	10%	50V (GRX7/GRX7J/RX77: CND)
C195	1-162-306-11	CERAMIC	0.01uF	20%	16V (GRX7/GRX7J/RX77: CND)
C196	1-162-306-11	CERAMIC	0.01uF	20%	16V (GRX7/GRX7J/RX77: CND)
C301	1-126-160-11	ELECT	1uF	20%	50V
C302	1-130-479-00	MYLAR	0.0047uF	5%	50V
C303	1-136-165-00	FILM	0.1uF	5%	50V
C304	1-136-165-00	FILM	0.1uF	5%	50V
C305	1-126-956-91	ELECT	0.1uF	20%	50V (AEP, UK, G, EE, CIS)
C305	1-126-964-11	ELECT	10uF	20%	50V (GRX7/GRX7J/RX77: CND)
C306	1-126-160-11	ELECT	1uF	20%	50V
C307	1-126-959-11	ELECT	0.47uF	20%	50V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-136-173-00	FILM	0.47uF	5%	50V
C310	1-162-290-31	CERAMIC	470PF	10%	50V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-126-959-11	ELECT	0.47uF	20%	50V
C313	1-162-294-31	CERAMIC	0.001uF	10%	50V
C314	1-126-964-11	ELECT	10uF	20%	50V
C315	1-126-963-11	ELECT	4.7uF	20%	50V
C316	1-126-933-11	ELECT	100uF	20%	10V
C317	1-126-933-11	ELECT	100uF	20%	10V
C320	1-162-290-31	CERAMIC	470PF	10%	50V
C331	1-164-159-11	CERAMIC	0.1uF		50V
C332	1-164-159-11	CERAMIC	0.1uF		50V
C333	1-162-600-11	CERAMIC	0.0047uF	20%	16V

Ref. No.	Part No.	Description			Remark
C334	1-162-600-11	CERAMIC	0.0047uF	20%	16V
C351	1-126-160-11	ELECT	1uF	20%	50V
C352	1-130-479-00	MYLAR	0.0047uF	5%	50V
C353	1-136-165-00	FILM	0.1uF	5%	50V
C354	1-136-165-00	FILM	0.1uF	5%	50V
C355	1-126-956-91	ELECT	0.1uF	20%	50V (AEP, UK, G, EE, CIS)
C355	1-126-964-11	ELECT	10uF	20%	50V (GRX7/GRX7J/RX77: CND)
C356	1-126-160-11	ELECT	1uF	20%	50V
C357	1-126-959-11	ELECT	0.47uF	20%	50V
C358	1-126-964-11	ELECT	10uF	20%	50V
C359	1-136-173-00	FILM	0.47uF	5%	50V
C381	1-162-306-11	CERAMIC	0.01uF	20%	16V
C382	1-126-933-11	ELECT	100uF	20%	10V
C391	1-164-159-11	CERAMIC	0.1uF		50V
C392	1-126-916-11	ELECT	1000uF	20%	6.3V
C393	1-164-159-11	CERAMIC	0.1uF		50V
C394	1-126-925-11	ELECT	470uF	20%	10V
C395	1-162-290-31	CERAMIC	470PF	10%	50V
C396	1-126-961-11	ELECT	2.2uF	20%	50V
C397	1-126-961-11	ELECT	2.2uF	20%	50V
C401	1-136-495-11	FILM	0.068uF	5%	50V (AEP, UK, G, EE, CIS)
C402	1-136-495-11	FILM	0.068uF	5%	50V (AEP, UK, G, EE, CIS)
C403	1-164-159-21	CERAMIC	0.1uF		50V (AEP, UK, G, EE, CIS)
C404	1-164-159-11	CERAMIC	0.1uF		50V (CND)
C410	1-126-963-11	ELECT	4.7uF	20%	50V (GRX7/GRX7J/RX77: CND)
C411	1-164-159-11	CERAMIC	0.1uF		50V (GRX7/GRX7J/RX77: CND)
C431	1-126-934-11	ELECT	220uF	20%	10V
C432	1-126-933-11	ELECT	100uF	20%	10V
C433	1-126-961-11	ELECT	2.2uF	20%	50V
C451	1-136-495-11	FILM	0.068uF	5%	50V (AEP, UK, G, EE, CIS)
C452	1-136-495-11	FILM	0.068uF	5%	50V (AEP, UK, G, EE, CIS)
C453	1-164-159-21	CERAMIC	0.1uF		50V (AEP, UK, G, EE, CIS)
C454	1-164-159-11	CERAMIC	0.1uF		50V (CND)
C501	1-126-967-11	ELECT	47uF	20%	10V
C502	1-164-159-11	CERAMIC	0.1uF		50V
C503	1-136-173-00	FILM	0.47uF	5%	50V
C504	1-126-916-11	ELECT	1000uF	20%	6.3V
C505	1-162-306-11	CERAMIC	0.01uF	20%	16V
C506	1-136-165-00	FILM	0.1uF	5%	50V
C507	1-164-159-11	CERAMIC	0.1uF		50V
C508	1-126-933-11	ELECT	100uF	20%	10V
C509	1-102-958-00	CERAMIC	20PF	5%	50V
C510	1-102-514-11	CERAMIC	22PF	5%	50V
C571	1-109-889-11	ELECT	1uF	20%	50V
C901	1-136-165-00	FILM	0.1uF	5%	50V
C902	1-128-548-11	ELECT	4700uF	20%	25V
C903	1-104-666-11	ELECT	220uF	20%	25V

Ref. No.	Part No.	Description			Remark
C904	1-126-967-11	ELECT	47uF	20%	16V
C905	1-104-661-91	ELECT	330uF	20%	16V
C909	1-126-964-11	ELECT	10uF	20%	50V
C910	1-126-933-11	ELECT	100uF	20%	10V
C911	1-126-964-11	ELECT	10uF	20%	50V
C912	1-126-767-11	ELECT	1000uF	20%	16V
C913	1-126-943-11	ELECT	2200uF	20%	25V
C914	1-126-767-11	ELECT	1000uF	20%	16V
C915	1-126-967-11	ELECT	47uF	20%	16V
C916	1-164-159-11	CERAMIC	0.1uF		50V
C917	1-126-933-11	ELECT	100uF	20%	16V
C918	1-126-968-11	ELECT	100uF	20%	50V
C919	1-126-968-11	ELECT	100uF	20%	50V
C920	1-126-964-11	ELECT	10uF	20%	50V
C921	1-126-947-11	ELECT	47uF	20%	35V
C951	1-136-165-00	FILM	0.1uF	5%	50V
C952	1-126-943-11	ELECT	2200uF	20%	25V
C953	1-104-666-11	ELECT	220uF	20%	25V
C955	1-104-661-91	ELECT	330uF	20%	16V

< CONNECTOR >

Ref. No.	Part No.	Description
CN101	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P
* CN102	1-568-832-11	SOCKET, CONNECTOR 13P (CND, E2, EA4, TH, MX, AUS)
CN102	1-568-834-11	SOCKET, CONNECTOR 15P (EXCEPT CND, E2, EA4, TH, MX, AUS)
* CN103	1-568-946-11	PIN, CONNECTOR 8P
* CN104	1-568-947-11	PIN, CONNECTOR 9P
* CN105	1-568-862-11	SOCKET, CONNECTOR 19P
CN106	1-568-834-11	SOCKET, CONNECTOR 15P
* CN107	1-568-836-11	SOCKET, CONNECTOR 17P
CN110	1-564-506-11	PLUG, CONNECTOR 3P (GRX7/GRX7J/RX77: CND)
* CN201	1-568-832-11	SOCKET, CONNECTOR 13P
* CN301	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P

< DIODE >

Ref. No.	Part No.	Description		Remark
D141	8-719-911-19	DIODE	1SS119	
D401	8-719-911-19	DIODE	1SS119	
D403	8-719-911-19	DIODE	1SS119 (GRX7/GRX7J/RX77: CND)	
D404	8-719-911-19	DIODE	1SS119 (GRX7/GRX7J/RX77: CND)	
D405	8-719-024-99	DIODE	11ES2-NTA2B (GRX7/GRX7J/RX77: CND)	
D406	8-719-024-99	DIODE	11ES2-NTA2B (GRX7/GRX7J/RX77: CND)	
D407	8-719-024-99	DIODE	11ES2-NTA2B (GRX7/GRX7J/RX77: CND)	
D501	8-719-024-99	DIODE	11ES2-NTA2B	
D502	8-719-024-99	DIODE	11ES2-NTA2B	
D503	8-719-911-19	DIODE	1SS119	
D504	8-719-911-19	DIODE	1SS119	
D505	8-719-911-19	DIODE	1SS119	
D506	8-719-911-19	DIODE	1SS119	
D507	8-719-024-99	DIODE	11ES2-NTA2B	
D508	8-719-911-19	DIODE	1SS119	
D901	8-719-024-99	DIODE	11ES2-NTA2B	
D902	8-719-024-99	DIODE	11ES2-NTA2B	
D903	8-719-024-99	DIODE	11ES2-NTA2B	
D904	8-719-024-99	DIODE	11ES2-NTA2B	
D905	8-719-985-87	DIODE	HZS6B1LTA	
D906	8-719-911-19	DIODE	1SS119	
D907	8-719-024-99	DIODE	11ES2-NTA2B	
D908	8-719-024-99	DIODE	11ES2-NTA2B	
D909	8-719-024-99	DIODE	11ES2-NTA2B	
D910	8-719-024-99	DIODE	11ES2-NTA2B	
D911	8-719-934-25	DIODE	HZS33-1L	
D912	8-719-921-48	DIODE	MTZJ-T-72-5.6C	
D913	8-719-911-19	DIODE	1SS119	
D914	8-719-024-99	DIODE	11ES2-NTA2B	
D915	8-719-986-17	DIODE	HZS11B1LTA	

< GROUND PLATE >

Ref. No.	Part No.	Description
* EPT1	4-870-539-11	PLATE, GROUND

< IC >

Ref. No.	Part No.	Description	
IC101	8-759-495-24	IC	M62442FP-TP (GRX7/GRX7J/RX77: CND)
IC101	8-759-495-86	IC	M62442FP-A-TP (AEP, UK, G, EE, CIS)
IC102	8-759-634-51	IC	M5218AP
IC191	8-759-634-50	IC	M5218AL (GRX7/GRX7J/RX77: CND)
IC301	8-759-495-26	IC	HA12215
IC381	8-749-923-04	IC	TOTX178 (CD DIGITAL OUT, OPTICAL)
IC501	8-759-496-10	IC	uPD780018AYGF-011-3BA
IC502	8-759-635-63	IC	M51943BSL
IC901	8-759-604-86	IC	M5F7807L
IC902	8-759-231-53	IC	TA7805S
IC903	8-759-231-58	IC	TA7812S

< JACK >

Ref. No.	Part No.	Description
J101	1-695-188-31	JACK, PIN 4P (MD/VIDEO (AUDIO), IN/OUT)
J191	1-774-785-11	JACK, PIN 1P (SUPER WOOFER) (GRX7/GRX7J/RX77: CND)

< COIL >

Ref. No.	Part No.	Description	
L301	1-410-524-11	INDUCTOR	220uH
L302	1-410-524-11	INDUCTOR	220uH
L381	1-410-521-11	INDUCTOR	100uH
L392	1-410-521-11	INDUCTOR	100uH
L401	1-420-872-00	COIL, AIR-CORE (AEP, UK, G, AED, EE, CIS)	
L451	1-420-872-00	COIL, AIR-CORE (AEP, UK, G, AED, EE, CIS)	
L501	1-410-509-11	INDUCTOR	10uH

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q111	8-729-620-05	TRANSISTOR	2SC2603-EF
Q112	8-729-620-05	TRANSISTOR	2SC2603-EF
Q113	8-729-141-30	TRANSISTOR	2SC3623A-LK
Q161	8-729-620-05	TRANSISTOR	2SC2603-EF
Q162	8-729-620-05	TRANSISTOR	2SC2603-EF
Q163	8-729-141-30	TRANSISTOR	2SC3623A-LK
Q191	8-729-141-30	TRANSISTOR	2SC3623A-LK (GRX7/GRX7J/RX77: CND)
Q331	8-729-118-00	TRANSISTOR	2SB1116-L
Q332	8-729-029-66	TRANSISTOR	DTC114ESA
Q333	8-729-118-00	TRANSISTOR	2SB1116-L
Q334	8-729-029-66	TRANSISTOR	DTC114ESA
Q335	8-729-029-66	TRANSISTOR	DTC114ESA
Q336	8-729-116-57	TRANSISTOR	2SB1068-K
Q337	8-729-144-44	TRANSISTOR	2SD1513-K

MAIN

Ref. No.	Part No.	Description				Remark
Q338	8-729-029-21	TRANSISTOR	DTA114ESA-TP			
Q339	8-729-029-66	TRANSISTOR	DTC114ESA			
Q340	8-729-116-57	TRANSISTOR	2SB1068-K			
Q341	8-729-144-44	TRANSISTOR	2SD1513-K			
Q342	8-729-029-21	TRANSISTOR	DTA114ESA-TP			
Q343	8-729-029-66	TRANSISTOR	DTC114ESA			
Q401	8-729-119-76	TRANSISTOR	2SA1175-HFE			(GRX7/GRX7J/RX77: CND)
Q402	8-729-111-29	TRANSISTOR	2SD1616A-K			(GRX7/GRX7J/RX77: CND)
Q431	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
Q432	8-729-140-82	TRANSISTOR	2SA988-PAFAEA			
Q433	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q434	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q435	8-729-029-86	TRANSISTOR	DTC124ESA			
Q436	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q437	8-729-029-86	TRANSISTOR	DTC124ESA			
Q501	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q571	8-729-029-40	TRANSISTOR	DTA124ESA			
Q572	8-729-029-40	TRANSISTOR	DTA124ESA			
Q575	8-729-029-86	TRANSISTOR	DTC124ESA			
Q901	8-729-209-15	TRANSISTOR	2SD2012			
Q902	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q903	8-729-029-68	TRANSISTOR	DTC114TSA			
Q905	8-729-040-20	TRANSISTOR	RT1P137L-TP			
Q906	8-729-029-40	TRANSISTOR	DTA124ESA			
Q907	8-729-040-20	TRANSISTOR	RT1P137L-TP			
Q908	8-729-029-86	TRANSISTOR	DTC124ESA			
Q909	8-729-026-68	TRANSISTOR	2SD2525(TP)			
Q910	8-729-030-19	TRANSISTOR	2SB1640			
Q913	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q914	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q951	8-729-141-83	TRANSISTOR	2SB1094-LK			
Q952	8-729-119-76	TRANSISTOR	2SA1175-HFE			
		< RESISTOR >				
R101	1-249-417-11	CARBON	1K	5%	1/4W	
R102	1-249-417-11	CARBON	1K	5%	1/4W	
R111	1-249-429-11	CARBON	10K	5%	1/4W	
R112	1-247-903-00	CARBON	1M	5%	1/4W	
R113	1-247-903-00	CARBON	1M	5%	1/4W	
R114	1-249-419-11	CARBON	1.5K	5%	1/4W	
R115	1-249-433-11	CARBON	22K	5%	1/4W	
R116	1-247-887-00	CARBON	220K	5%	1/4W	
R117	1-249-429-11	CARBON	10K	5%	1/4W	
R118	1-249-437-11	CARBON	47K	5%	1/4W	
R119	1-249-421-11	CARBON	2.2K	5%	1/4W	
R120	1-249-441-11	CARBON	100K	5%	1/4W	
R121	1-249-429-11	CARBON	10K	5%	1/4W	
R123	1-249-437-11	CARBON	47K	5%	1/4W	
R124	1-249-421-11	CARBON	2.2K	5%	1/4W	
R125	1-247-843-11	CARBON	3.3K	5%	1/4W	
R126	1-249-437-11	CARBON	47K	5%	1/4W	
R127	1-249-437-11	CARBON	47K	5%	1/4W	
R128	1-249-421-11	CARBON	2.2K	5%	1/4W	
R131	1-247-807-31	CARBON	100	5%	1/4W	
R132	1-247-807-31	CARBON	100	5%	1/4W	
R133	1-247-807-31	CARBON	100	5%	1/4W	
R141	1-249-433-11	CARBON	22K	5%	1/4W	
R142	1-249-433-11	CARBON	22K	5%	1/4W	
R143	1-249-417-11	CARBON	1K	5%	1/4W	
R144	1-249-441-11	CARBON	100K	5%	1/4W	
R145	1-247-903-00	CARBON	1M	5%	1/4W	
R151	1-249-417-11	CARBON	1K	5%	1/4W	
R152	1-249-417-11	CARBON	1K	5%	1/4W	
R161	1-249-429-11	CARBON	10K	5%	1/4W	
R162	1-247-903-00	CARBON	1M	5%	1/4W	
R163	1-247-903-00	CARBON	1M	5%	1/4W	
R164	1-249-419-11	CARBON	1.5K	5%	1/4W	
R165	1-249-433-11	CARBON	22K	5%	1/4W	
R166	1-247-887-00	CARBON	220K	5%	1/4W	
R167	1-249-429-11	CARBON	10K	5%	1/4W	
R168	1-249-437-11	CARBON	47K	5%	1/4W	
R169	1-249-421-11	CARBON	2.2K	5%	1/4W	
R170	1-249-441-11	CARBON	100K	5%	1/4W	
R171	1-249-429-11	CARBON	10K	5%	1/4W	
R173	1-249-437-11	CARBON	47K	5%	1/4W	
R178	1-249-421-11	CARBON	2.2K	5%	1/4W	
R191	1-249-437-11	CARBON	47K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R192	1-249-437-11	CARBON	47K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R193	1-249-437-11	CARBON	47K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R194	1-247-843-11	CARBON	3.3K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R195	1-249-429-11	CARBON	10K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R196	1-249-417-11	CARBON	1K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R197	1-249-441-11	CARBON	100K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R198	1-249-417-11	CARBON	1K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R199	1-249-429-11	CARBON	10K	5%	1/4W	(GRX7/GRX7J/RX77: CND)
R301	1-249-435-11	CARBON	33K	5%	1/4W	
R302	1-249-421-11	CARBON	2.2K	5%	1/4W	
R303	1-247-807-31	CARBON	100	5%	1/4W	
R304	1-247-807-31	CARBON	100	5%	1/4W	
R305	1-249-421-11	CARBON	2.2K	5%	1/4W	
R306	1-249-428-11	CARBON	8.2K	5%	1/4W	
R307	1-249-428-11	CARBON	8.2K	5%	1/4W	
R308	1-249-425-11	CARBON	4.7K	5%	1/4W	
R309	1-249-433-11	CARBON	22K	5%	1/4W	
R311	1-247-903-00	CARBON	1M	5%	1/4W	
R312	1-247-884-11	CARBON	160K	5%	1/4W	
R313	1-249-441-11	CARBON	100K	5%	1/4W	
R315	1-249-429-11	CARBON	10K	5%	1/4W	
R316	1-249-432-11	CARBON	18K	5%	1/4W	
R317	1-249-429-11	CARBON	10K	5%	1/4W	
R318	1-249-429-11	CARBON	10K	5%	1/4W	
R319	1-247-893-11	CARBON	390K	5%	1/4W	
R321	1-249-422-11	CARBON	2.7K	5%	1/4W	
R322	1-249-428-11	CARBON	8.2K	5%	1/4W	
R324	1-247-876-11	CARBON	75K	5%	1/4W	
R325	1-249-437-11	CARBON	47K	5%	1/4W	

Ref. No.	Part No.	Description			Remark
R326	1-249-437-11	CARBON	47K	5%	1/4W
R327	1-249-437-11	CARBON	47K	5%	1/4W
R328	1-247-876-11	CARBON	75K	5%	1/4W
R329	1-249-417-11	CARBON	1K	5%	1/4W
R330	1-249-425-11	CARBON	4.7K	5%	1/4W
R331	1-249-425-11	CARBON	4.7K	5%	1/4W
R332	1-249-415-11	CARBON	680	5%	1/4W
R333	1-249-421-11	CARBON	2.2K	5%	1/4W
R334	1-249-415-11	CARBON	680	5%	1/4W
R335	1-249-421-11	CARBON	2.2K	5%	1/4W
R336	1-249-437-11	CARBON	47K	5%	1/4W
R337	1-249-417-11	CARBON	1K	5%	1/4W
R338	1-249-411-11	CARBON	330	5%	1/4W
R339	1-249-437-11	CARBON	47K	5%	1/4W
R340	1-249-437-11	CARBON	47K	5%	1/4W
R341	1-249-411-11	CARBON	330	5%	1/4W
R342	1-249-437-11	CARBON	47K	5%	1/4W
R343	1-249-417-11	CARBON	1K	5%	1/4W
R351	1-249-435-11	CARBON	33K	5%	1/4W
R352	1-249-421-11	CARBON	2.2K	5%	1/4W
R353	1-247-807-31	CARBON	100	5%	1/4W
R354	1-247-807-31	CARBON	100	5%	1/4W
R355	1-249-421-11	CARBON	2.2K	5%	1/4W
R356	1-249-428-11	CARBON	8.2K	5%	1/4W
R357	1-249-428-11	CARBON	8.2K	5%	1/4W
R358	1-249-425-11	CARBON	4.7K	5%	1/4W
R359	1-249-435-11	CARBON	33K	5%	1/4W
R391	1-247-807-31	CARBON	100	5%	1/4W
R392	1-247-807-31	CARBON	100	5%	1/4W
R393	1-249-435-11	CARBON	33K	5%	1/4W
R394	1-249-435-11	CARBON	33K	5%	1/4W
R401	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK, G, EE, CIS)
R402	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK, G, EE, CIS)
R406	1-249-437-11	CARBON	47K	5%	1/4W (GRX7/GRX7J/RX77: CND)
R407	1-249-437-11	CARBON	47K	5%	1/4W (GRX7/GRX7J/RX77: CND)
R408	1-249-425-11	CARBON	4.7K	5%	1/4W (GRX7/GRX7J/RX77: CND)
R409	1-249-441-11	CARBON	100K	5%	1/4W (GRX7/GRX7J/RX77: CND)
R410	1-249-421-11	CARBON	2.2K	5%	1/4W (GRX7/GRX7J/RX77: CND)
⚠R411	1-215-893-11	METAL OXIDE	1.5K	5%	2W F (GRX7/GRX7J)
⚠R411	1-216-456-00	METAL OXIDE	820	5%	2W F (AEP, UK, G, EE, CIS)
⚠R411	1-216-457-00	METAL OXIDE	1.2K	5%	2W F (CND)
R421	1-260-091-11	CARBON	220	5%	1/2W
R422	1-260-091-11	CARBON	220	5%	1/2W
R431	1-249-438-11	CARBON	56K	5%	1/4W
R432	1-249-437-11	CARBON	47K	5%	1/4W
R435	1-249-425-11	CARBON	4.7K	5%	1/4W
R437	1-249-429-11	CARBON	10K	5%	1/4W
R438	1-249-429-11	CARBON	10K	5%	1/4W
R439	1-249-425-11	CARBON	4.7K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R440	1-247-903-91	CARBON	1M	5%	1/4W
R441	1-249-429-11	CARBON	10K	5%	1/4W
R443	1-249-417-11	CARBON	1K	5%	1/4W
R451	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK, G, EE, CIS)
R452	1-260-076-11	CARBON	10	5%	1/2W (AEP, UK, G, EE, CIS)
R471	1-260-091-11	CARBON	220	5%	1/2W
R472	1-260-091-11	CARBON	220	5%	1/2W
R501	1-249-413-11	CARBON	470	5%	1/4W
R502	1-249-425-11	CARBON	4.7K	5%	1/4W
R503	1-249-437-11	CARBON	47K	5%	1/4W
R504	1-249-437-11	CARBON	47K	5%	1/4W
R505	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-247-897-11	CARBON	560K	5%	1/4W
R508	1-249-425-11	CARBON	4.7K	5%	1/4W
R511	1-247-843-11	CARBON	3.3K	5%	1/4W (AEP, UK, G)
R511	1-249-425-11	CARBON	4.7K	5%	1/4W (GRX7: AUS)
R511	1-249-427-11	CARBON	6.8K	5%	1/4W (EE, CIS, E2, MX, JE)
R511	1-249-431-11	CARBON	15K	5%	1/4W (EA4, TH)
R512	1-247-843-11	CARBON	3.3K	5%	1/4W (JE)
R512	1-249-415-11	CARBON	680	5%	1/4W (EA4, TH)
R512	1-249-425-11	CARBON	4.7K	5%	1/4W (E2, MX)
R512	1-249-427-11	CARBON	6.8K	5%	1/4W (AEP, UK, G, AUS)
R512	1-249-435-11	CARBON	33K	5%	1/4W (EE, CIS)
R521	1-247-807-31	CARBON	100	5%	1/4W
R522	1-247-807-31	CARBON	100	5%	1/4W (AEP, UK, G)
R523	1-247-807-31	CARBON	100	5%	1/4W (AEP, UK, G)
R524	1-249-429-11	CARBON	10K	5%	1/4W
R526	1-249-429-11	CARBON	10K	5%	1/4W
R527	1-247-807-31	CARBON	100	5%	1/4W
R528	1-247-807-31	CARBON	100	5%	1/4W
R529	1-247-807-31	CARBON	100	5%	1/4W
R530	1-247-807-31	CARBON	100	5%	1/4W
R531	1-247-807-31	CARBON	100	5%	1/4W
R532	1-247-807-31	CARBON	100	5%	1/4W
R533	1-247-807-31	CARBON	100	5%	1/4W
R534	1-247-807-31	CARBON	100	5%	1/4W
R535	1-247-807-31	CARBON	100	5%	1/4W
R536	1-247-807-31	CARBON	100	5%	1/4W
R537	1-247-807-31	CARBON	100	5%	1/4W
R538	1-247-807-31	CARBON	100	5%	1/4W
R539	1-247-807-31	CARBON	100	5%	1/4W
R540	1-247-807-31	CARBON	100	5%	1/4W
R541	1-247-807-31	CARBON	100	5%	1/4W
R542	1-247-807-31	CARBON	100	5%	1/4W
R543	1-247-807-31	CARBON	100	5%	1/4W
R544	1-249-429-11	CARBON	10K	5%	1/4W
R545	1-247-807-31	CARBON	100	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
R546	1-247-843-11	CARBON	3.3K	5%	1/4W
R547	1-247-807-31	CARBON	100	5%	1/4W
R548	1-247-807-31	CARBON	100	5%	1/4W
R549	1-247-807-31	CARBON	100	5%	1/4W
R550	1-247-807-31	CARBON	100	5%	1/4W
R551	1-247-807-31	CARBON	100	5%	1/4W
R552	1-247-807-31	CARBON	100	5%	1/4W
R553	1-249-429-11	CARBON	10K	5%	1/4W
R554	1-247-807-31	CARBON	100	5%	1/4W
R555	1-249-429-11	CARBON	10K	5%	1/4W
R556	1-247-807-31	CARBON	100	5%	1/4W
R557	1-249-429-11	CARBON	10K	5%	1/4W
R558	1-247-807-31	CARBON	100	5%	1/4W
R559	1-249-429-11	CARBON	10K	5%	1/4W
R561	1-247-807-31	CARBON	100	5%	1/4W
R562	1-247-807-31	CARBON	100	5%	1/4W
R563	1-247-807-31	CARBON	100	5%	1/4W
R564	1-247-807-31	CARBON	100	5%	1/4W
R565	1-247-807-31	CARBON	100	5%	1/4W
R566	1-247-807-31	CARBON	100	5%	1/4W
R567	1-247-807-31	CARBON	100	5%	1/4W
R571	1-249-421-11	CARBON	2.2K	5%	1/4W
R572	1-249-441-11	CARBON	100K	5%	1/4W
R576	1-249-429-11	CARBON	10K	5%	1/4W
R577	1-249-417-11	CARBON	1K	5%	1/4W
R901	1-247-843-11	CARBON	3.3K	5%	1/4W
R902	1-249-415-11	CARBON	680	5%	1/4W
R903	1-249-419-11	CARBON	1.5K	5%	1/4W
R904	1-249-414-11	CARBON	560	5%	1/4W
R905	1-249-425-11	CARBON	4.7K	5%	1/4W
R906	1-247-843-11	CARBON	3.3K	5%	1/4W
R907	1-249-415-11	CARBON	680	5%	1/4W
R908	1-249-429-11	CARBON	10K	5%	1/4W
R909	1-249-430-11	CARBON	12K	5%	1/4W
R911	1-249-409-11	CARBON	220	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-249-425-11	CARBON	4.7K	5%	1/4W
R914	1-249-409-11	CARBON	220	5%	1/4W
R915	1-249-409-11	CARBON	220	5%	1/4W
R920	1-249-383-11	CARBON	1.5	5%	1/6W
R921	1-249-383-11	CARBON	1.5	5%	1/6W
		< VARIABLE RESISTOR >			
RV301	1-238-600-11	RES, ADJ, CARBON 10K			
RV351	1-238-600-11	RES, ADJ, CARBON 10K			
		< RELAY >			
RY401	1-515-920-11	RELAY (24V)			
		< TERMINAL >			
TM401	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SPEAKER)			
TM402	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SURROUND SPEAKER) (CND)			
		< VIBRATOR >			
X501	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			

Ref. No.	Part No.	Description			Remark
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

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Ref. No.	Part No.	Description			Remark
*	1-658-578-11	MOTOR (SLIDE) BOARD *******************			
		< CAPACITOR >			
C801	1-162-306-11	CERAMIC	0.01uF	20%	16V
C804	1-162-306-11	CERAMIC	0.01uF	20%	16V
C805	1-126-964-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
* CN801	1-568-947-11	PIN, CONNECTOR 9P			
		< DIODE >			
D801	8-719-010-43	DIODE UZ-5.6BSC			
D804	8-719-911-19	DIODE 1SS119			
D805	8-719-911-19	DIODE 1SS119			
		< IC >			
IC801	8-759-274-09	IC BA6286N			
		< RESISTOR >			
R801	1-249-401-11	CARBON	47	5%	1/4W
		< SWITCH >			
S801	1-762-527-11	SWITCH, ROTARY			

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Ref. No.	Part No.	Description			Remark
*	1-658-577-11	MOTOR (TURN) BOARD ******************			
		< CAPACITOR >			
C701	1-162-306-11	CERAMIC	0.01uF	20%	16V
C702	1-126-964-11	ELECT	10uF	20%	50V
C705	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< CONNECTOR >			
CN703	1-750-413-11	CONNECTOR, FFC/FPC 8P			
CN704	1-506-469-11	PIN, CONNECTOR 4P			
		< DIODE >			
D701	8-719-109-69	DIODE RD3.6ES-B2			
		< IC >			
IC701	8-759-633-65	IC M54641L			
		< RESISTOR >			
R706	1-249-411-11	CARBON	330	5%	1/4W
R707	1-249-401-11	CARBON	47	5%	1/4W

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	Ref. No.	Part No.	Description				Remark
*		A-4403-990-A	PANEL BOARD, COMPLETE (EE, CIS)				
*		A-4407-013-A	PANEL BOARD, COMPLETE (EXCEPT AEP, UK, G, EE, CIS, EA3)				
*		A-4407-015-A	PANEL BOARD, COMPLETE (EA3)				
*		A-4407-998-A	PANEL BOARD, COMPLETE (AEP, UK,G)				
			**********************				
*		4-949-935-21	CUSHION (FL)				
*		4-996-724-01	HOLDER, FL TUBE				
			< CAPACITOR >				
	C601	1-164-159-11	CERAMIC	0.1uF		50V	
	C602	1-162-306-11	CERAMIC	0.01uF	20%	16V	
	C603	1-124-589-11	ELECT	47uF	20%	16V	
	C604	1-126-163-11	ELECT	4.7uF	20%	50V	
	C605	1-162-294-31	CERAMIC	0.001uF	10%	50V	
	C606	1-126-160-11	ELECT	1uF	20%	50V	
	C607	1-126-160-11	ELECT	1uF	20%	50V	
	C608	1-162-294-31	CERAMIC	0.001uF	10%	50V	
	C609	1-162-282-31	CERAMIC	100PF	10%	50V	
	C610	1-162-282-31	CERAMIC	100PF	10%	50V	
	C611	1-162-282-31	CERAMIC	100PF	10%	50V	
	C612	1-162-282-31	CERAMIC	100PF	10%	50V	
	C613	1-162-282-31	CERAMIC	100PF	10%	50V	
	C614	1-162-282-31	CERAMIC	100PF	10%	50V	
	C615	1-162-282-31	CERAMIC	100PF	10%	50V	
	C616	1-162-282-31	CERAMIC	100PF	10%	50V	
	C617	1-162-282-31	CERAMIC	100PF	10%	50V	
	C618	1-162-282-31	CERAMIC	100PF	10%	50V	
	C619	1-162-282-31	CERAMIC	100PF	10%	50V	
	C620	1-162-282-31	CERAMIC	100PF	10%	50V	
	C621	1-162-282-31	CERAMIC	100PF	10%	50V	
	C625	1-162-294-31	CERAMIC	0.001uF	10%	50V	
	C626	1-124-589-11	ELECT	47uF	20%	16V	
	C627	1-162-306-11	CERAMIC	0.01uF	20%	16V	
	C628	1-162-306-11	CERAMIC	0.01uF	20%	16V	
	C629	1-162-306-11	CERAMIC	0.01uF	20%	16V	
	C630	1-162-306-11	CERAMIC	0.01uF	20%	16V	
	C631	1-126-157-11	ELECT	10uF	20%	16V	
	C632	1-126-157-11	ELECT	10uF	20%	16V	
	C633	1-162-303-11	CERAMIC	0.0033uF	30%	16V	
	C634	1-126-157-11	ELECT	10uF	20%	16V	
	C635	1-126-163-11	ELECT	4.7uF	20%	50V	
	C648	1-162-306-11	CERAMIC	0.01uF	20%	16V	
	C649	1-124-589-11	ELECT	47uF	20%	16V	
	C749	1-164-159-11	CERAMIC	0.1uF		50V	
	C752	1-164-159-11	CERAMIC	0.1uF		50V	
	C753	1-162-290-31	CERAMIC	470PF	10%	50V	
	C754	1-162-306-11	CERAMIC	0.01uF	20%	16V	
	C755	1-126-961-11	ELECT	2.2uF	20%	50V	
	C756	1-162-294-31	CERAMIC	0.001uF	10%	50V	
	C757	1-162-215-31	CERAMIC	47PF	5%	50V	
	C758	1-126-964-11	ELECT	10uF	20%	50V	
	C759	1-126-956-91	ELECT	0.1uF	20%	50V	
	C760	1-162-215-31	CERAMIC	47PF	5%	50V	
	C761	1-162-282-31	CERAMIC	100PF	10%	50V	
	C762	1-126-961-11	ELECT	2.2uF	20%	50V	
	C764	1-126-964-11	ELECT	10uF	20%	50V	
	C765	1-126-960-11	ELECT	1uF	20%	50V	(EA3)
	C766	1-162-305-11	CERAMIC	0.0068uF	30%	16V	(EA3)
	C767	1-162-294-31	CERAMIC	0.001uF	10%	50V	(EA3)
	C768	1-136-495-11	FILM	0.068uF	5%	50V	(EA3)
	C769	1-126-957-11	ELECT	0.22uF	20%	50V	(EA3)
	C770	1-126-957-11	ELECT	0.22uF	20%	50V	(EA3)
	C771	1-126-967-11	ELECT	47uF	20%	10V	(EA3)
	C772	1-164-159-11	CERAMIC	0.1uF		50V	(EA3)
	C773	1-126-967-11	ELECT	47uF	20%	10V	(EA3)
	C774	1-136-495-11	FILM	0.068uF	5%	50V	(EA3)
	C775	1-162-305-11	CERAMIC	0.0068uF	30%	16V	(EA3)
	C776	1-162-294-31	CERAMIC	0.001uF	10%	50V	(EA3)
	C777	1-136-167-00	FILM	0.15uF	5%	50V	(EA3)
	C778	1-126-960-11	ELECT	1uF	20%	50V	(EA3)
	C779	1-161-494-00	CERAMIC	0.022uF		25V	(EA3)
	C780	1-126-961-11	ELECT	2.2uF	20%	50V	(EA3)
			< CONNECTOR >				
*	CN601	1-568-856-11	SOCKET, CONNECTOR 13P				
			< DIODE >				
	D602	8-719-986-73	DIODE RB441Q				
	D610	8-719-063-93	LED SLR325VC-N-T32 (ENTER/NEXT)				
	D612	8-719-057-97	LED SEL5923A-TP15 (GROOVE)				
	D613	8-719-063-93	LED SLR325VC-N-T32 (JOG)				
	D614	8-719-064-65	LED SELU5723C-TP15 (DJMIX)				
	D615	8-719-064-65	LED SELU5723C-TP15 (DJMIX)				
	D616	8-719-063-93	LED SLR325VC-N-T32 (NON-STOP)				
	D617	8-719-057-97	LED SEL5923A-TP15 (+, ▶▶)				
	D618	8-719-057-97	LED SEL5923A-TP15 (–, ◀◀)				
	D620	8-719-063-93	LED SLR325VC-N-T32 (EFFECT) (GRX7/GRX7J/RX77: CND)				
	D621	8-719-056-13	LED SML79423C-TP15 (CD, ▶II)				
	D622	8-719-058-03	LED SEL5423E-TP15 (TAPE B, ▶)				
	D623	8-719-058-03	LED SEL5423E-TP15 (TAPE B, ◀)				
	D624	8-719-058-03	LED SEL5423E-TP15 (TAPE A, ▶)				
	D625	8-719-058-03	LED SEL5423E-TP15 (TAPE A, ◀)				
	D651	8-719-063-93	LED SLR325VC-N-T32 (● REC)				
	D652	8-719-057-97	LED SEL5923A-TP15 (II PAUSE)				
	D751	8-719-024-99	DIODE 11ES2-NTA2B (EA3)				
	D752	8-719-024-99	DIODE 11ES2-NTA2B (EA3)				
	D753	8-719-024-99	DIODE 11ES2-NTA2B (EA3)				

PANEL

Ref. No.	Part No.	Description			Remark
		<LEAD>			
EL2	1-690-880-51	LEAD (WITH CONNECTOR)			
		< FERRITE BEAD >			
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1uH			
		< FLUORESCENT INDICATOR TUBE >			
FL601	1-517-731-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC601	8-759-536-41	IC TMP87PM74F-6695			
IC602	8-749-011-05	IC GP1U28X			
IC603	8-759-495-25	IC BA3833F-E2			
IC750	8-759-634-51	IC M5218AP			
IC751	8-759-496-40	IC M65850FP (EA3)			
		< JACK >			
J751	1-784-224-11	JACK (LARGE TYPE) (MIX MIC)			
		< COIL >			
L601	1-410-509-11	INDUCTOR	10uH		
L751	1-410-521-11	INDUCTOR	100uH (EA3)		
		< TRANSISTOR >			
Q601	8-729-118-00	TRANSISTOR	2SB1116-L		
Q602	8-729-118-00	TRANSISTOR	2SB1116-L		
Q603	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q604	8-729-029-68	TRANSISTOR	DTC114TSA		
Q607	8-729-029-68	TRANSISTOR	DTC114TSA		
					(GRX7/GRX7J/RX77: CND)
Q608	8-729-029-68	TRANSISTOR	DTC114TSA		
Q609	8-729-029-68	TRANSISTOR	DTC114TSA		
Q610	8-729-029-68	TRANSISTOR	DTC114TSA		
Q618	8-729-029-68	TRANSISTOR	DTC114TSA		
Q620	8-729-029-68	TRANSISTOR	DTC114TSA		
Q621	8-729-029-68	TRANSISTOR	DTC114TSA		
		< RESISTOR >			
R601	1-247-903-00	CARBON	1M	5%	1/4W
R602	1-247-807-31	CARBON	100	5%	1/4W
R604	1-249-429-11	CARBON	10K	5%	1/4W
R605	1-249-429-11	CARBON	10K	5%	1/4W
R606	1-249-429-11	CARBON	10K	5%	1/4W
R607	1-249-429-11	CARBON	10K	5%	1/4W
R608	1-247-843-11	CARBON	3.3K	5%	1/4W
R609	1-247-843-11	CARBON	3.3K	5%	1/4W
R610	1-247-807-31	CARBON	100	5%	1/4W
R611	1-247-807-31	CARBON	100	5%	1/4W
R612	1-249-401-11	CARBON	47	5%	1/4W
R613	1-249-421-11	CARBON	2.2K	5%	1/4W
					(GRX7/GRX7J/RX77: CND)
R614	1-249-433-11	CARBON	22K	5%	1/4W
					(GRX7/GRX7J/RX77: CND)
R615	1-249-437-11	CARBON	47K	5%	1/4W
R616	1-249-441-11	CARBON	100K	5%	1/4W
R618	1-249-437-11	CARBON	47K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R619	1-249-435-11	CARBON	33K	5%	1/4W
R620	1-247-895-00	CARBON	470K	5%	1/4W
R621	1-249-427-11	CARBON	6.8K	5%	1/4W
R622	1-249-409-11	CARBON	220	5%	1/4W
R623	1-249-410-11	CARBON	270	5%	1/4W
R624	1-249-412-11	CARBON	390	5%	1/4W
R625	1-249-413-11	CARBON	470	5%	1/4W
R626	1-249-415-11	CARBON	680	5%	1/4W
R627	1-249-416-11	CARBON	820	5%	1/4W
R628	1-249-418-11	CARBON	1.2K	5%	1/4W
R629	1-249-419-11	CARBON	1.5K	5%	1/4W
R630	1-249-421-11	CARBON	2.2K	5%	1/4W
R631	1-247-843-11	CARBON	3.3K	5%	1/4W
R632	1-249-425-11	CARBON	4.7K	5%	1/4W
R633	1-249-427-11	CARBON	6.8K	5%	1/4W
R634	1-249-429-11	CARBON	10K	5%	1/4W
R636	1-249-427-11	CARBON	6.8K	5%	1/4W
R637	1-249-409-11	CARBON	220	5%	1/4W
R638	1-249-410-11	CARBON	270	5%	1/4W
R639	1-249-412-11	CARBON	390	5%	1/4W
R640	1-249-413-11	CARBON	470	5%	1/4W
R641	1-249-415-11	CARBON	680	5%	1/4W
R642	1-249-416-11	CARBON	820	5%	1/4W
R643	1-249-418-11	CARBON	1.2K	5%	1/4W
R649	1-249-427-11	CARBON	6.8K	5%	1/4W
R650	1-249-409-11	CARBON	220	5%	1/4W
R651	1-249-410-11	CARBON	270	5%	1/4W
R652	1-249-412-11	CARBON	390	5%	1/4W
R653	1-249-413-11	CARBON	470	5%	1/4W
R654	1-249-415-11	CARBON	680	5%	1/4W
R655	1-249-416-11	CARBON	820	5%	1/4W
R661	1-249-429-11	CARBON	10K	5%	1/4W
R662	1-249-421-11	CARBON	2.2K	5%	1/4W
R663	1-249-421-11	CARBON	2.2K	5%	1/4W
R664	1-249-409-11	CARBON	220	5%	1/4W
R665	1-249-429-11	CARBON	10K	5%	1/4W
R666	1-249-407-11	CARBON	150	5%	1/4W
R667	1-247-807-31	CARBON	100	5%	1/4W
R668	1-249-407-11	CARBON	150	5%	1/4W
R669	1-247-804-11	CARBON	75	5%	1/4W
R670	1-249-407-11	CARBON	150	5%	1/4W
R671	1-249-407-11	CARBON	150	5%	1/4W
R672	1-249-407-11	CARBON	150	5%	1/4W
R673	1-249-407-11	CARBON	150	5%	1/4W
					(GRX7/GRX7J/RX77: CND)
R674	1-247-804-11	CARBON	75	5%	1/4W
R675	1-247-804-11	CARBON	75	5%	1/4W
R676	1-247-804-11	CARBON	75	5%	1/4W
R677	1-247-804-11	CARBON	75	5%	1/4W
R678	1-247-804-11	CARBON	75	5%	1/4W
R679	1-247-804-11	CARBON	75	5%	1/4W
R683	1-249-441-11	CARBON	100K	5%	1/4W
R684	1-249-441-11	CARBON	100K	5%	1/4W
R685	1-247-804-11	CARBON	75	5%	1/4W
R725	1-249-427-11	CARBON	6.8K	5%	1/4W
R726	1-249-409-11	CARBON	220	5%	1/4W
R727	1-249-410-11	CARBON	270	5%	1/4W
R728	1-249-412-11	CARBON	390	5%	1/4W

Ref. No.	Part No.	Description			Remark
R729	1-249-413-11	CARBON	470	5%	1/4W
R730	1-249-415-11	CARBON	680	5%	1/4W
R731	1-249-416-11	CARBON	820	5%	1/4W
R732	1-249-418-11	CARBON	1.2K	5%	1/4W
R733	1-249-419-11	CARBON	1.5K	5%	1/4W
R742	1-249-407-11	CARBON	150	5%	1/4W
R743	1-247-807-31	CARBON	100	5%	1/4W
R750	1-249-429-11	CARBON	10K	5%	1/4W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-249-441-11	CARBON	100K	5%	1/4W
R753	1-249-417-11	CARBON	1K	5%	1/4W
R754	1-249-433-11	CARBON	22K	5%	1/4W
R755	1-249-429-11	CARBON	10K	5%	1/4W
R756	1-247-885-00	CARBON	180K	5%	1/4W
R757	1-247-807-31	CARBON	100	5%	1/4W
R758	1-249-433-11	CARBON	22K	5%	1/4W (EA3)
R759	1-249-433-11	CARBON	22K	5%	1/4W (EA3)
R760	1-249-433-11	CARBON	22K	5%	1/4W (EA3)
R761	1-247-881-00	CARBON	120K	5%	1/4W (EA3)
R762	1-249-433-11	CARBON	22K	5%	1/4W (EA3)
R763	1-249-433-11	CARBON	22K	5%	1/4W (EA3)
R764	1-249-433-11	CARBON	22K	5%	1/4W (EA3)
R765	1-249-437-11	CARBON	47K	5%	1/4W (EA3)
R766	1-249-431-11	CARBON	15K	5%	1/4W (EA3)
R767	1-249-431-11	CARBON	15K	5%	1/4W (EA3)
		< VARIABLE RESISTOR >			
RV750	1-225-574-11	RES, VAR (MIC LEVEL)			
RV751	1-223-983-11	RES, VAR, CARBON 50K (ECHO LEVEL)			(EA3)
		< SWITCH >			
S601	1-473-534-11	ENCODER, ROTARY (⏮←→⏭, DJ MIX (JOG))			
S602	1-473-392-11	ENCODER, ROTARY (VOLUME)			
S604	1-771-410-11	SWITCH, KEYBOARD (FILE SELECT)			(AEP, UK, G, EE, CIS)
S604	1-771-410-11	SWITCH, KEYBOARD (EFFECT)			(GRX7/GRX7J/RX77: CND)
S605	1-771-410-11	SWITCH, KEYBOARD (SURROUND)			
S606	1-771-410-11	SWITCH, KEYBOARD (KARAOKE PON/MPX)			
S607	1-771-410-11	SWITCH, KEYBOARD (■)			
S608	1-771-410-11	SWITCH, KEYBOARD (TIMER SELECT)			
S609	1-771-410-11	SWITCH, KEYBOARD (CLOCK/TIMER SET)			
S610	1-771-410-11	SWITCH, KEYBOARD (DISPLAY/DEMO)			
S611	1-771-410-11	SWITCH, KEYBOARD (FILE SELECT)			(GRX7/GRX7J/RX77: CND)
S612	1-771-410-11	SWITCH, KEYBOARD (GEQ CONTROL)			(GRX7/GRX7J/RX77: CND)
S613	1-771-410-11	SWITCH, KEYBOARD (P FILE MEMORY)			(GRX7/GRX7J/RX77: CND)

Ref. No.	Part No.	Description	Remark
S614	1-771-410-11	SWITCH, KEYBOARD (FUNCTION)	
S615	1-771-410-11	SWITCH, KEYBOARD (EDIT, DIRECTION)	
S616	1-771-410-11	SWITCH, KEYBOARD (PLAY MODE, DOLBY NR)	
S617	1-771-410-11	SWITCH, KEYBOARD (REPEAT)	
S618	1-771-410-11	SWITCH, KEYBOARD (LOOP)	
S619	1-771-410-11	SWITCH, KEYBOARD (FLASH)	
S620	1-771-410-11	SWITCH, KEYBOARD (NON-STOP)	
S621	1-771-410-11	SWITCH, KEYBOARD (–, ◀◀)	
S622	1-771-410-11	SWITCH, KEYBOARD (ENTER/NEXT)	
S623	1-771-410-11	SWITCH, KEYBOARD (+, ▶▶)	
S624	1-771-410-11	SWITCH, KEYBOARD (DBFB)	
S625	1-771-410-11	SWITCH, KEYBOARD (GROOVE)	
S631	1-771-410-11	SWITCH, KEYBOARD (TUNER, BAND)	
S632	1-771-410-11	SWITCH, KEYBOARD (CD, ▶❚❚)	
S633	1-771-410-11	SWITCH, KEYBOARD (TAPE B, ▶)	
S634	1-771-410-11	SWITCH, KEYBOARD (TAPE B, ◀)	
S635	1-771-410-11	SWITCH, KEYBOARD (TAPE A, ▶)	
S636	1-771-410-11	SWITCH, KEYBOARD (TAPE A, ◀)	
S655	1-771-410-11	SWITCH, KEYBOARD (PTY)	(AEP, UK, G)
S656	1-771-410-11	SWITCH, KEYBOARD (● REC)	
S657	1-771-410-11	SWITCH, KEYBOARD (❚❚ PAUSE)	
S658	1-771-410-11	SWITCH, KEYBOARD (HI-DUB)	
S659	1-771-410-11	SWITCH, KEYBOARD (CD SYNC)	
		< VIBRATOR >	
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)	

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Ref. No.	Part No.	Description	Remark
*	A-4403-998-A	POWER AMP BOARD, COMPLETE	(AEP, UK, G, EE, CIS)
*	A-4407-010-A	POWER AMP BOARD, COMPLETE	(EXCEPT CND, AEP, UK, G, EE, CIS)
*	A-4407-027-A	POWER AMP BOARD, COMPLETE	(CND)

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Ref. No.	Part No.	Description				Remark
	7-685-646-79	SCREW +BVTP 3X8 TYPE2N-S				
		< CAPACITOR >				
C801	1-126-963-11	ELECT	4.7uF	20%	50V	(EXCEPT CND)
C801	1-128-582-11	ELECT	10uF	20%	100V	(CND)
C802	1-162-286-31	CERAMIC	220PF	10%	50V	
C803	1-162-282-31	CERAMIC	100PF	10%	50V	
C804	1-126-967-11	ELECT	47uF	20%	50V	
C806	1-126-967-11	ELECT	47uF	20%	50V	
C807	1-126-965-11	ELECT	22uF	20%	50V	(AEP, UK, G, EE, CIS)
C807	1-128-560-11	ELECT	22uF	20%	100V	(GRX7/GRX7J/RX77: CND)
C809	1-126-965-11	ELECT	22uF	20%	50V	(AEP, UK, G, EE, CIS)
C809	1-128-560-11	ELECT	22uF	20%	100V	(GRX7/GRX7J/RX77: CND)
C810	1-164-159-11	CERAMIC	0.1uF		50V	
C811	1-136-495-11	FILM	0.068uF	5%	50V	
C812	1-136-495-11	FILM	0.068uF	5%	50V	
C813	1-162-306-11	CERAMIC	0.01uF	10%	16V	
C814	1-162-306-11	CERAMIC	0.01uF	10%	16V	(AEP, UK, G, EE, CIS)

POWER AMP

Ref. No.	Part No.	Description	Remark
C841	1-130-777-00	FILM 0.1uF 10% 100V	(GRX7/GRX7J/RX77: CND)
C841	1-136-165-00	FILM 0.1uF 5% 50V	(AEP, UK, G, EE, CIS)
C842	1-117-750-11	ELECT 3300uF 20% 63V	(CND)
C842	1-126-974-11	ELECT 3300uF 20% 50V	(AEP, UK, G, EE, CIS)
C842	1-128-493-11	ELECT 4700uF 20% 71V	(GRX7/GRX7J)
C843	1-126-925-11	ELECT 470uF 20% 10V	(AEP, UK, G, EE, CIS)
C843	1-126-934-11	ELECT 220uF 20% 10V	(GRX7/GRX7J/RX77: CND)
C851	1-126-963-11	ELECT 4.7uF 20% 50V	(EXCEPT CND)
C851	1-128-582-11	ELECT 10uF 20% 100V	(CND)
C852	1-162-286-31	CERAMIC 220PF 10% 50V	
C853	1-162-282-31	CERAMIC 100PF 10% 50V	
C854	1-126-967-11	ELECT 47uF 20% 50V	
C856	1-126-967-11	ELECT 47uF 20% 50V	
C857	1-126-965-11	ELECT 22uF 20% 50V	(AEP, UK, G, EE, CIS)
C857	1-128-560-11	ELECT 22uF 20% 100V	(GRX7/GRX7J/RX77: CND)
C861	1-136-495-11	FILM 0.068uF 5% 50V	
C862	1-136-495-11	FILM 0.068uF 5% 50V	
C891	1-130-777-00	FILM 0.1uF 10% 100V	(GRX7/GRX7J/RX77: CND)
C891	1-136-165-00	FILM 0.1uF 5% 50V	(AEP, UK, G, EE, CIS)
C892	1-117-750-11	ELECT 3300uF 20% 63V	(CND)
C892	1-126-974-11	ELECT 3300uF 20% 50V	(AEP, UK, G, EE, CIS)
C892	1-128-493-11	ELECT 4700uF 20% 71V	(GRX7/GRX7J)
		< CONNECTOR >	
CN801	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P	
		< DIODE >	
D800	8-719-302-38	DIODE RBV-602-01 (GRX7/GRX7J)	
D800	8-719-510-68	DIODE D5SBA20F01 (R700/RX77/RX77S)	
D801	8-719-911-19	DIODE 1SS119	
D841	8-719-911-19	DIODE 1SS119	
D842	8-719-911-19	DIODE 1SS119	
D843	8-719-911-19	DIODE 1SS119	
D851	8-719-911-19	DIODE 1SS119	
		< IC >	
IC801	8-749-900-34	IC STK-4182MK2 (AEP, UK, G, EE, CIS)	
IC801	8-749-921-04	IC STK-4211MK2 (CND)	
IC801	8-749-921-68	IC STK-4231MK2 (GRX7/GRX7J)	
		< TRANSISTOR >	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q831	8-729-029-86	TRANSISTOR DTC124ESA	(GRX7/GRX7J/RX77: CND)

Ref. No.	Part No.	Description	Remark
Q832	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	(GRX7/GRX7J/RX77: CND)
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
		< RESISTOR >	
R801	1-249-417-11	CARBON 1K 5% 1/4W	
R802	1-249-437-11	CARBON 47K 5% 1/4W	
R803	1-247-826-00	CARBON 620 5% 1/4W	(AEP, UK, G, EE, CIS)
R803	1-249-412-11	CARBON 390 5% 1/4W	(GRX7/GRX7J/RX77: CND)
R804	1-249-437-11	CARBON 47K 5% 1/4W	
R805	1-260-105-11	CARBON 3.3K 5% 1/2W	(AEP, UK, G, EE, CIS)
R805	1-260-107-11	CARBON 4.7K 5% 1/2W	(GRX7/GRX7J/RX77: CND)
R806	1-260-105-11	CARBON 3.3K 5% 1/2W	(AEP, UK, G, EE, CIS)
R806	1-260-107-11	CARBON 4.7K 5% 1/2W	(GRX7/GRX7J/RX77: CND)
⚠R807	1-212-881-11	FUSIBLE 100 5% 1/4W F	
⚠R808	1-220-755-11	METAL 0.22 10% 2W F	(AEP, UK, G, EE, CIS)
⚠R808	1-220-893-11	METAL 0.22 10% 5W F	(GRX7/GRX7J/RX77: CND)
R809	1-260-076-11	CARBON 10 5% 1/2W	
R811	1-249-417-11	CARBON 1K 5% 1/4W	
R812	1-249-431-11	CARBON 15K 5% 1/4W	
R813	1-249-441-11	CARBON 100K 5% 1/4W	
R814	1-260-099-11	CARBON 1K 5% 1/2W	(AEP, UK, G, EE, CIS)
R814	1-260-103-11	CARBON 2.2K 5% 1/2W	(CND)
R814	1-260-105-11	CARBON 3.3K 5% 1/2W	(GRX7/GRX7J)
R816	1-260-099-11	CARBON 1K 5% 1/2W	(AEP, UK, G, EE, CIS)
R816	1-260-103-11	CARBON 2.2K 5% 1/2W	(CND)
R816	1-260-105-11	CARBON 3.3K 5% 1/2W	(GRX7/GRX7J)
⚠R820	1-202-972-61	FUSIBLE 1 5% 1/4W F	
R831	1-249-441-11	CARBON 100K 5% 1/4W	(GRX7/GRX7J/RX77: CND)
R832	1-249-441-11	CARBON 100K 5% 1/4W	(GRX7/GRX7J/RX77: CND)
R833	1-247-881-00	CARBON 120K 5% 1/4W	(GRX7/GRX7J)
R833	1-249-441-11	CARBON 100K 5% 1/4W	(CND)
R841	1-249-421-11	CARBON 2.2K 5% 1/4W	(AEP, UK, G, EE, CIS)
R841	1-249-428-11	CARBON 8.2K 5% 1/4W	(GRX7/GRX7J/RX77: CND)
R842	1-249-425-11	CARBON 4.7K 5% 1/4W	(AEP, UK, G, EE, CIS)
R842	1-249-429-11	CARBON 10K 5% 1/4W	(GRX7/GRX7J/RX77: CND)
R843	1-247-882-11	CARBON 130K 5% 1/4W	(AEP, UK, G, EE, CIS)
R843	1-247-895-00	CARBON 470K 5% 1/4W	(GRX7/GRX7J/RX77: CND)

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Ref. No.	Part No.	Description			Remark
R844	1-249-421-11	CARBON	2.2K	5%	1/4W (AEP, UK, G, EE, CIS)
R844	1-249-425-11	CARBON	4.7K	5%	1/4W (CND)
R844	1-249-428-11	CARBON	8.2K	5%	1/4W (GRX7/GRX7J)
R851	1-249-417-11	CARBON	1K	5%	1/4W
R852	1-249-437-11	CARBON	47K	5%	1/4W
R853	1-247-826-00	CARBON	620	5%	1/4W (AEP, UK, G, EE, CIS)
R853	1-249-412-11	CARBON	390	5%	1/4W (GRX7/GRX7J/RX77: CND)
R854	1-249-437-11	CARBON	47K	5%	1/4W
R855	1-260-105-11	CARBON	3.3K	5%	1/2W (AEP, UK, G, EE, CIS)
R855	1-260-107-11	CARBON	4.7K	5%	1/2W (GRX7/GRX7J/RX77: CND)
R856	1-260-105-11	CARBON	3.3K	5%	1/2W (AEP, UK, G, EE, CIS)
R856	1-260-107-11	CARBON	4.7K	5%	1/2W (GRX7/GRX7J/RX77: CND)
⚠R857	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R858	1-220-755-11	METAL	0.22	10%	2W F (AEP, UK, G, EE, CIS)
⚠R858	1-220-893-11	METAL	0.22	10%	5W F (GRX7/GRX7J/RX77: CND)
R859	1-260-076-11	CARBON	10	5%	1/2W
R861	1-249-417-11	CARBON	1K	5%	1/4W
R862	1-249-431-11	CARBON	15K	5%	1/4W
R863	1-249-441-11	CARBON	100K	5%	1/4W
		< THERMISTOR >			
TH831	1-807-796-11	THERMISTOR (GRX7/GRX7J/RX77: CND)			

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*	1-658-576-11	SENSOR BOARD *************			
		< IC >			
IC702	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391			
IC703	8-749-924-30	IC PHOTO REFLECTOR GP2S28			
		< RESISTOR >			
R701	1-249-416-11	CARBON	820	5%	1/4W
R702	1-249-407-11	CARBON	150	5%	1/4W

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*	A-4303-588-A	TCB BOARD, COMPLETE (EE,CIS) *******************			
		< CAPACITOR >			
C1	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C2	1-126-967-11	ELECT	47uF	20%	16V
C3	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C6	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C7	1-101-004-00	CERAMIC	0.01uF		50V
C8	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C9	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C10	1-162-306-11	CERAMIC CHIP	0.01uF	30%	16V

Ref. No.	Part No.	Description			Remark
C16	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C19	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C21	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C22	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C23	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C24	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C26	1-126-967-11	ELECT	47uF	20%	16V
C28	1-126-967-11	ELECT	47uF	20%	16V
C29	1-162-306-11	CERAMIC	0.01uF	30%	16V
C30	1-126-961-11	ELECT	2.2uF	20%	50V
C31	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C32	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C33	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C34	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C35	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C36	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C37	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C39	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C40	1-126-967-11	ELECT	47uF	20%	16V
C41	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C42	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C43	1-163-031-91	CERAMIC CHIP	0.01uF		50V
C44	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C45	1-163-077-00	CERAMIC CHIP	0.1uF		50V
C46	1-126-967-11	ELECT	47uF	20%	16V
C47	1-126-301-11	ELECT	1.0uF	20%	50V
C48	1-163-059-00	CERAMIC CHIP	0.01uF		50V
C49	1-126-964-11	ELECT	10uF	20%	50V
C50	1-126-960-11	ELECT	1.0uF	20%	50V
C51	1-126-959-11	ELECT	0.47uF	20%	50V
C52	1-126-960-11	ELECT	1.0uF	20%	50V
C53	1-126-964-11	ELECT	10uF	20%	50V
C54	1-104-396-11	ELECT	10uF	20%	16V
C55	1-104-396-11	ELECT	10uF	20%	16V
C56	1-104-396-11	ELECT	10uF	20%	16V
C57	1-163-017-00	CERAMIC CHIP	0.0047uF	10%	50V
C58	1-163-017-00	CERAMIC CHIP	0.0047uF	10%	50V
C59	1-163-989-11	CERAMIC CHIP	33000PF	10%	25V
C60	1-163-989-11	CERAMIC CHIP	33000PF	10%	25V
C61	1-126-301-11	ELECT	1.0uF	20%	50V
C62	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C63	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C65	1-126-967-11	ELECT	47uF	20%	16V
C66	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C67	1-126-162-11	ELECT	3.3uF	20%	50V
C68	1-163-031-11	CERAMIC	0.01uF		50V
C69	1-126-967-11	ELECT	47uF	20%	16V
C71	1-162-306-11	CERAMIC	0.01uF	30%	16V
C72	1-126-967-11	ELECT	47uF	20%	16V
C73	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C74	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1701	1-162-294-31	CERAMIC CHIP	1000PF	10%	50V
C1702	1-130-014-00	FILM	470PF	5%	50V
C1703	1-126-959-11	ELECT	0.47uF	20%	50V
C1704	1-126-959-11	ELECT	0.47uF	20%	50V
C1705	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C1706	1-126-960-11	ELECT	1.0uF	20%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TCB

Ref. No.	Part No.	Description			Remark
C1707	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C1710	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C1711	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C1712	1-130-736-11	FILM	0.01uF	5%	50V
C1713	1-130-736-11	FILM	0.01uF	5%	50V
C1714	1-126-960-11	ELECT	1.0uF	20%	50V
C1715	1-126-960-11	ELECT	1.0uF	20%	50V
C1716	1-126-960-11	ELECT	1.0uF	20%	50V
C1719	1-126-967-11	ELECT	47uF	20%	16V
C1720	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1723	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1724	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1725	1-126-967-11	ELECT	47uF	20%	16V
C1726	1-126-960-11	ELECT	1.0uF	20%	50V
C1727	1-126-960-11	ELECT	1.0uF	20%	50V
C1728	1-126-966-11	ELECT	33uF	20%	16V
		< CERAMIC FILTER >			
CF1	1-567-389-11	FILTER, CERAMIC			
CF3	1-567-389-11	FILTER, CERAMIC			
		< CONNECTOR >			
* CN1	1-568-834-11	SOCKET, CONNECTOR 15P			
		< TRIMMER >			
CT1701	1-141-444-11	CAP, CERAMIC TRIMMER 50PF			
CT1701	1-141-569-11	CAP, ADJ 50PF			
		< DIODE >			
D21	8-719-976-99	DIODE	DTZ5.1B		
D41	8-719-016-74	DIODE	1SS352		
D42	8-719-016-74	DIODE	1SS352		
D43	8-719-016-74	DIODE	1SS352		
D1701	8-719-016-74	DIODE	1SS352		
D1702	8-719-016-74	DIODE	1SS352		
D1703	8-719-991-33	DIODE	1SS133T		
D1704	8-719-016-74	DIODE	1SS352		
		< FRONT-END >			
FE1	1-693-335-11	FRONT END (3 GANG)			
FE2	1-233-514-11	ENCAPSULATED COMPONENT			
		< IC >			
IC21	8-759-288-54	IC	LC72130		
IC41	8-759-495-82	IC	LA1838		
IC1701	8-759-063-04	IC	IR3R42		
IC1702	8-759-140-53	IC	uPD4053BC		
		< IFT >			
IFT41	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)			
		< JUMPER RESISTOR >			
JR2	1-216-295-91	METAL CHIP	0	5%	1/10W
JR6	1-216-295-91	METAL CHIP	0	5%	1/10W
JR8	1-216-295-91	METAL CHIP	0	5%	1/10W
JR9	1-216-295-91	METAL CHIP	0	5%	1/10W
JR12	1-216-296-91	METAL CHIP	0	5%	1/8W

Ref. No.	Part No.	Description			Remark
JR46	1-216-296-91	METAL CHIP	0	5%	1/8W
JR47	1-216-295-91	METAL CHIP	0	5%	1/10W
JR48	1-216-295-91	METAL CHIP	0	5%	1/10W
JR49	1-216-296-91	METAL CHIP	0	5%	1/8W
JR51	1-216-295-91	METAL CHIP	0	5%	1/10W
JR52	1-216-295-91	METAL CHIP	0	5%	1/10W
JR53	1-216-296-91	METAL CHIP	0	5%	1/8W
JR54	1-216-295-91	METAL CHIP	0	5%	1/10W
JR1701	1-216-295-91	METAL CHIP	0	5%	1/10W
JR1702	1-216-295-91	METAL CHIP	0	5%	1/10W
JR1703	1-216-295-91	METAL CHIP	0	5%	1/10W
JR1704	1-216-295-91	METAL CHIP	0	5%	1/10W
JR1705	1-216-295-91	METAL CHIP	0	5%	1/10W
		< COIL >			
L3	1-410-521-11	MICRO INDUCTOR		100uH	
L41	1-407-500-00	MICRO INDUCTOR		4.7mH	
L1701	1-409-497-11	COIL (FILTER)			
		< LOW-PASS FILTER >			
LPF41	1-239-845-11	FILTER, LOW PASS			
LPF42	1-239-845-11	FILTER, LOW PASS			
		< TRANSISTOR >			
Q1	8-729-201-27	TRANSISTOR	2SC2715Y		
Q2	8-729-201-27	TRANSISTOR	2SC2715Y		
Q3	8-729-201-27	TRANSISTOR	2SC2715Y		
Q4	8-729-201-27	TRANSISTOR	2SC2715Y		
Q5	8-729-216-22	TRANSISTOR	MUN2111		
Q9	8-729-216-22	TRANSISTOR	2SA812-M5M6		
Q11	8-729-421-22	TRANSISTOR	MUN2211		
Q12	8-729-421-22	TRANSISTOR	MUN2211		
Q13	8-729-421-22	TRANSISTOR	MUN2211		
Q14	8-729-421-22	TRANSISTOR	MUN2211		
Q1701	8-729-424-08	TRANSISTOR	MUN2111		
Q1702	8-729-027-43	TRANSISTOR	RT1N141C		
Q1703	8-729-421-22	TRANSISTOR	MUN2211		
		< RESISTOR >			
R1	1-249-401-11	CARBON	47	5%	1/4W
R2	1-216-037-00	METAL CHIP	330	5%	1/10W
R3	1-216-037-00	METAL CHIP	330	5%	1/10W
R5	1-216-037-00	METAL CHIP	330	5%	1/10W
R6	1-216-081-00	METAL CHIP	22K	5%	1/10W
R7	1-216-037-00	METAL CHIP	330	5%	1/10W
R8	1-216-037-00	METAL CHIP	330	5%	1/10W
R9	1-216-081-00	METAL CHIP	22K	5%	1/10W
R10	1-216-037-00	METAL CHIP	330	5%	1/10W
R11	1-216-081-00	METAL CHIP	22K	5%	1/10W
R12	1-216-037-00	METAL CHIP	330	5%	1/10W
R13	1-216-037-00	METAL CHIP	330	5%	1/10W
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
R19	1-216-073-00	METAL CHIP	10K	5%	1/10W
R21	1-249-417-11	CARBON	1.0K	5%	1/4W
R22	1-249-417-11	CARBON	1.0K	5%	1/4W
R23	1-249-417-11	CARBON	1.0K	5%	1/4W
R24	1-247-807-31	CARBON	100	5%	1/4W

Ref. No.	Part No.	Description			Remark
R25	1-249-417-11	CARBON	1.0K	5%	1/4W
R26	1-249-437-11	CARBON	47K	5%	1/4W
R27	1-249-429-11	CARBON	10K	5%	1/4W
R28	1-249-417-11	CARBON	1.0K	5%	1/4W
R29	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R30	1-216-186-00	METAL CHIP	330	5%	1/8W
R31	1-216-025-91	METAL CHIP	100	5%	1/10W
R32	1-249-425-11	CARBON	4.7K	5%	1/4W
R33	1-249-425-11	CARBON	4.7K	5%	1/4W
R34	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R35	1-216-214-00	METAL CHIP	4.7K	5%	1/8W
R36	1-216-025-91	METAL CHIP	100	5%	1/10W
R37	1-216-073-00	METAL CHIP	10K	5%	1/10W
R38	1-216-089-91	METAL CHIP	47K	5%	1/10W
R39	1-249-429-11	CARBON	10K	5%	1/4W
R41	1-216-013-00	METAL CHIP	33	5%	1/10W
R42	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R43	1-216-037-00	METAL CHIP	330	5%	1/10W
R44	1-216-001-00	METAL CHIP	10	5%	1/10W
R45	1-247-843-11	CARBON	3.3K	5%	1/4W
R46	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R47	1-216-097-91	METAL CHIP	100K	5%	1/10W
R48	1-249-417-11	CARBON	1.0K	5%	1/4W
R49	1-216-049-91	METAL CHIP	1.0K	5%	1/10W
R50	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R51	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R52	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R53	1-216-061-00	METAL CHIP	3.3K	5%	1/4W
R54	1-216-073-00	METAL CHIP	10K	5%	1/10W
R55	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R57	1-216-162-00	METAL CHIP	33	5%	1/8W
R58	1-216-013-00	METAL CHIP	33	5%	1/10W
R91	1-216-295-91	METAL CHIP	0	5%	1/10W
R92	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1701	1-216-081-00	METAL CHIP	22K	5%	1/10W
R1702	1-216-085-00	METAL CHIP	33K	5%	1/10W
R1703	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R1704	1-216-076-00	METAL CHIP	13K	5%	1/10W
R1705	1-216-049-91	METAL CHIP	1.0K	5%	1/10W
R1706	1-216-049-91	METAL CHIP	1.0K	5%	1/10W
R1707	1-216-097-91	METAL CHIP	100K	5%	1/10W
R1708	1-216-095-00	METAL CHIP	82K	5%	1/10W
R1709	1-216-089-91	METAL CHIP	47K	5%	1/10W
R1710	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1711	1-249-429-11	CARBON	10K	5%	1/4W
R1714	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R1715	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R1716	1-216-097-91	METAL CHIP	100K	5%	1/10W
R1717	1-216-097-91	METAL CHIP	100K	5%	1/10W
R1718	1-249-429-11	CARBON	10K	5%	1/4W
R1719	1-216-097-91	METAL CHIP	100K	5%	1/10W
R1720	1-249-434-11	CARBON	27K	5%	1/4W
R1721	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< VARIABLE RESISTOR >			
RV41	1-238-600-11	RES, ADJ, CARBON 10K			
RV42	1-238-599-11	RES, ADJ, CARBON 4.7K			

Ref. No.	Part No.	Description	Remark
RV1701	1-238-600-11	RES, ADJ, CARBON 10K	
RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K	
		< TERMINAL >	
TM1	1-537-488-11	TERMINAL BOARD (ANT) (ANTENNA)	
		< TEST PIN>	
TP1701	1-536-354-00	PIN, POST	
TP1702	1-536-354-00	PIN, POST	
		< VIBRATOR >	
X21	1-760-549-31	VIBRATOR, CRYSTAL (4.5MHz)	
X21	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	
X41	1-767-825-21	FILTER, CERAMIC (10.7MHz)	
X42	1-527-981-00	FILTER, CERAMIC (450kHz)	

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* A-4303-590-A TCB BOARD, COMPLETE (AEP,UK,G)

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< CAPACITOR >

C1	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C2	1-126-967-11	ELECT	47uF	20%	16V
C3	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C5	1-163-031-11	CERAMIC CHIP	0,01uF		50V
C6	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C8	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C9	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C10	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C16	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C19	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C21	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C22	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C23	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C24	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C26	1-126-967-11	ELECT	47uF	20%	16V
C28	1-126-967-11	ELECT	47uF	20%	16V
C29	1-162-306-11	CERAMIC	0.01uF	30%	16V
C30	1-126-961-11	ELECT	2.2uF	20%	50V
C31	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C32	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C33	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C34	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C35	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C36	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C37	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C39	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C40	1-126-967-11	ELECT	47uF	20%	16V
C41	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C42	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C43	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C44	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C45	1-163-077-00	CERAMIC CHIP	0.1uF		50V
C46	1-126-967-11	ELECT	47uF	20%	16V
C47	1-126-301-11	ELECT	1.0uF	20%	50V
C48	1-163-059-00	CERAMIC CHIP	0.01uF		50V
C49	1-126-964-11	ELECT	10uF	20%	50V

TCB

Ref. No.	Part No.	Description			Remark
C50	1-126-960-11	ELECT	1.0uF	20%	50V
C51	1-126-959-11	ELECT	0.47uF	20%	50V
C52	1-126-960-11	ELECT	1.0uF	20%	50V
C53	1-126-964-11	ELECT	10uF	20%	50V
C54	1-104-396-11	ELECT	10uF	20%	16V
C55	1-104-396-11	ELECT	10uF	20%	16V
C56	1-104-396-11	ELECT	10uF	20%	16V
C57	1-163-017-00	CERAMIC CHIP	0.0047uF	10%	50V
C58	1-163-017-00	CERAMIC CHIP	0.0047uF	10%	50V
C59	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C60	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C61	1-126-301-11	ELECT	1uF	20%	50V
C62	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C63	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C65	1-126-967-11	ELECT	47uF	20%	16V
C66	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C67	1-126-16211	ELECT	3.3uF	20%	50V
C68	1-163-031-11	CERAMIC	0.01uF		50V
C69	1-126-967-11	ELECT	47uF	20%	16V
C71	1-162-306-11	CERAMIC	0.01uF	30%	16V
C72	1-126-967-11	ELECT	47uF	20%	16V
C73	1-163-031-11	CERAMIC	0.01uF		50V
C74	1-163-031-11	CERAMIC	0.01uF		50V
C120	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C1751	1-164-159-21	CERAMIC	0.1uF		50V
C1752	1-126-967-11	ELECT	47uF	20%	16V
C1753	1-126-964-11	ELECT	10uF	20%	50V
C1754	1-162-291-31	CERAMIC	560PF	10%	50V
C1755	1-126-964-11	ELECT	10uF	20%	50V
C1756	1-126-961-11	ELECT	2.2uF	20%	50V
C1757	1-162-288-31	CERAMIC	330PF	10%	50V
C1758	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1759	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C1760	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C1761	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C1762	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C1763	1-126-961-11	ELECT	2.2uF	20%	50V
		< CERAMIC FILTER >			
CF1	1-579-374-71	FILTER, CERAMIC			
CF2	1-760-393-11	FILTER, CERAMIC			
CF3	1-760-393-11	FILTER, CERAMIC			
		< CONNECTOR >			
* CN1	1-568-834-11	SOCKET, CONNECTOR 15P			
		< DIODE >			
D21	8-719-976-99	DIODE	UDZ-TE-17-5.1B		
D41	8-719-016-74	DIODE	1SS352-TPH3		
D42	8-719-991-33	DIODE	1SS133T-77		
D1751	8-719-016-74	DIODE	1SS352-TPH3		
		< FRONT-END >			
FE1	1-693-357-11	FRONT END (4 GANG)			
FE2	1-233-514-11	ENCAPSULATED COMPONENT			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC21	8-759-288-54	IC	LC72130		
IC41	8-759-495-82	IC	LA1838		
IC1751	8-759-634-51	IC	M5218AP		
IC1752	8-759-450-86	IC	BU1922		
		< IFT >			
IFT41	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)			
		< JUMPER RESISTOR >			
JR2	1-216-295-91	METAL CHIP	0	5%	1/10W
JR6	1-216-295-91	METAL CHIP	0	5%	1/10W
JR8	1-216-295-91	METAL CHIP	0	5%	1/10W
JR9	1-216-295-91	METAL CHIP	0	5%	1/10W
JR12	1-216-296-91	METAL CHIP	0	5%	1/8W
JR46	1-216-296-91	METAL CHIP	0	5%	1/8W
JR47	1-216-295-11	METAL CHIP	0	5%	1/10W
JR48	1-216-295-11	METAL CHIP	0	5%	1/10W
JR49	1-216-296-11	METAL CHIP	0	5%	1/8W
JR51	1-216-295-11	METAL CHIP	0	5%	1/10W
JR52	1-216-295-11	METAL CHIP	0	5%	1/10W
JR53	1-216-296-11	METAL CHIP	0	5%	1/8W
JR54	1-216-295-11	METAL CHIP	0	5%	1/10W
		< COIL >			
L2	1-414-142-11	MICRO INDUCTOR		1uH	
L3	1-410-521-11	MICRO INDUCTOR		100uH	
L4	1-410-515-11	INDUCTOR		33uH	
L41	1-407-500-00	MICRO INDUCTOR		4.7mH	
L1751	1-410-521-11	MICRO INDUCTOR		100uH	
		<LOW-PASS FILTER >			
LPF41	1-239-845-11	FILTER, LOW PASS			
LPF42	1-239-845-11	FILTER, LOW PASS			
		< TRANSISTOR >			
Q1	8-729-201-27	TRANSISTOR	2SC2715Y-TE85L		
Q2	8-729-201-27	TRANSISTOR	2SC2715Y-TE85L		
Q3	8-729-201-27	TRANSISTOR	2SC2715Y-TE85L		
Q4	8-729-201-27	TRANSISTOR	2SC2715Y-TE85L		
Q5	8-729-424-08	TRANSISTOR	MUN2111		
Q9	8-729-216-22	TRANSISTOR	2SA812-M5M6		
Q11	8-729-421-22	TRANSISTOR	MUN2211		
Q12	8-729-421-22	TRANSISTOR	MUN2211		
Q13	8-729-421-22	TRANSISTOR	MUN2211		
Q14	8-729-421-22	TRANSISTOR	MUN2211		
		< RESISTOR >			
R1	1-249-401-11	CARBON	47	5%	1/4W
R2	1-216-037-00	METAL CHIP	330	5%	1/10W
R3	1-216-037-00	METAL CHIP	330	5%	1/10W
R5	1-216-037-00	METAL CHIP	330	5%	1/10W
R6	1-216-081-00	METAL CHIP	22K	5%	1/10W
R7	1-216-037-00	METAL CHIP	330	5%	1/10W
R8	1-216-037-00	METAL CHIP	330	5%	1/10W
R9	1-216-081-00	METAL CHIP	22K	5%	1/10W
R10	1-216-037-00	METAL CHIP	330	5%	1/10W
R11	1-216-081-00	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R12	1-216-037-00	METAL CHIP	330	5%	1/10W
R13	1-216-037-00	METAL CHIP	330	5%	1/10W
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
R19	1-216-073-00	METAL CHIP	10K	5%	1/10W
R21	1-216-049-91	METAL CHIP	1.0K	5%	1/10W
R22	1-216-049-91	METAL CHIP	1.0K	5%	1/10W
R23	1-216-049-91	METAL CHIP	1.0K	5%	1/10W
R24	1-216-025-91	METAL CHIP	100	5%	1/10W
R25	1-249-417-11	CARBON	1K	5%	1/4W
R26	1-249-437-11	CARBON	47K	5%	1/4W
R27	1-249-429-11	CARBON	10K	5%	1/4W
R28	1-249-417-11	CARBON	1K	5%	1/4W
R29	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R30	1-216-186-00	METAL CHIP	330	5%	1/8W
R31	1-216-025-91	METAL CHIP	100	5%	1/10W
R32	1-249-425-11	CARBON	4.7K	5%	1/4W
R33	1-249-425-11	CARBON	4.7K	5%	1/4W
R34	1-249-425-11	CARBON	4.7K	5%	1/10W
R35	1-216-214-00	METAL CHIP	4.7K	5%	1/8W
R36	1-216-025-91	METAL CHIP	100	5%	1/10W
R37	1-216-073-00	METAL CHIP	10K	5%	1/10W
R38	1-216-089-91	METAL CHIP	47K	5%	1/10W
R39	1-249-429-11	CARBON	10K	5%	1/4W
R41	1-216-013-00	METAL CHIP	33	5%	1/10W
R42	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R43	1-216-037-00	METAL CHIP	330	5%	1/10W
R44	1-216-001-00	METAL CHIP	10	5%	1/10W
R45	1-247-843-11	CARBON	3.3K	5%	1/4W
R46	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R47	1-216-097-91	METAL CHIP	100K	5%	1/10W
R48	1-249-417-11	CARBON	1K	5%	1/4W
R49	1-216-049-91	METAL CHIP	1.0K	5%	1/10W
R50	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R51	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R52	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R53	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R54	1-216-073-00	METAL CHIP	10K	5%	1/10W
R55	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R57	1-216-162-00	METAL CHIP	33	5%	1/8W
R58	1-216-013-00	METAL CHIP	33	5%	1/10W
R91	1-216-295-91	METAL CHIP	0	5%	1/10W
R92	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1751	1-247-807-31	CARBON	100	5%	1/4W
R1752	1-216-073-00	METAL CHIP	10K	5%	1/10W
R1753	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R1754	1-216-097-91	METAL CHIP	100K	5%	1/10W
R1755	1-216-097-91	METAL CHIP	100K	5%	1/10W
R1756	1-249-401-11	CARBON	47	5%	1/4W
R1757	1-216-295-91	METAL CHIP	0	5%	1/10W
		< VARIABLE RESISTOR >			
RV41	1-238-600-11	RES, ADJ, CARBON 10K			
RV42	1-238-600-11	RES, ADJ, CARBON 10K			
		< TERMINAL >			
TM1	1-537-488-11	TERMINAL BOARD (ANT) (ANTENNA)			

Ref. No.	Part No.	Description			Remark
		< VIBRATOR >			
X21	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)			
X41	1-767-825-21	FILTER, CERAMIC (10.7MHz)			
X42	1-527-981-00	FILTER, CERAMIC (450kHz)			
X1751	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)			

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Ref. No.	Part No.	Description			Remark
*	1-668-208-11	TRANSFORMER BOARD *******************			
	1-533-217-31	HOLDER, FUSE			
		< CONNECTOR >			
CN11	1-564-523-11	PLUG, CONNECTOR 8P			
* CN12	1-564-518-11	PLUG, CONNECTOR 3P			
CN13	1-564-321-00	PIN, CONNECTOR 2P			
		< FUSE >			
⚠F11	1-532-388-31	FUSE (T2AL/250V) (EXCEPT CND, AEP, UK, G, EE, CIS, MX)			
⚠F11	1-532-503-31	FUSE (T1.6AL/250V) (AEP, UK, G, EE, CIS)			
⚠F12	1-532-504-31	FUSE (T4AL/250V) (E2, E3, EA3, MY, SP, IA, HK, TW, SAF, MX, JE)			
⚠F12	1-533-310-11	FUSE, GLASS TUBE6.3A 125V (CND)			
		< RESISTOR >			
⚠R11	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (GRX7/GRX7J/RX77: CND)
⚠R11	1-219-121-11	FUSIBLE	0.22	5%	1/4W F (AEP, UK, G, EE, CIS)
⚠R12	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (GRX7/GRX7J/RX77: CND)
⚠R12	1-219-121-11	FUSIBLE	0.22	5%	1/4W F (AEP, UK, G, EE, CIS)
⚠R13	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (GRX7/GRX7J/RX77: CND)
⚠R13	1-219-121-11	FUSIBLE	0.22	5%	1/4W F (AEP, UK, G, EE, CIS)
⚠R14	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (GRX7/GRX7J/RX77: CND)
⚠R14	1-219-121-11	FUSIBLE	0.22	5%	1/4W F (AEP, UK, G, EE, CIS)
R15	1-202-725-00	SOLID	3.3M	10%	1/2W (CND)
		< SWITCH >			
⚠S11	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (POWER SELECT) (E2, E3, EA3, MY, SP, IA, HK, TW, SAF)			
		< TRANSFORMER >			
⚠T11	1-431-659-11	TRANSFORMER, POWER (CND)			
⚠T11	1-431-660-11	TRANSFORMER, POWER (AEP, UK, G, EE, CIS)			
⚠T11	1-431-661-11	TRANSFORMER, POWER (GRX7/GRX7J)			

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS **************	
6	1-769-984-11	WIRE (FLAT TYPE) (13 CORE) (23CM)	
10	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)	
11	1-773-025-11	WIRE (FLAT TYPE) (15 CORE) (33CM)	
106	1-783-570-11	WIRE (FLAT TYPE) (19 CORE) (24CM)	
108	1-769-976-11	WIRE (FLAT TYPE) (13 CORE) (14CM) (CND, E2, EA4, TH, MX, AUS)	
108	1-773-008-11	WIRE (FLAT TYPE) (15 CORE) (14CM) (GRX7: E3, EA3, MY, SP, IA, HK, TW, SAF/ GRX7J/R700/RX77: AEP, G, EE/RX77S)	
109	1-233-544-11	ENCAPSULATED COMPONENT (CND)	
109	1-233-545-11	ENCAPSULATED COMPONENT	
109	1-233-546-11	ENCAPSULATED COMPONENT	
109	1-693-385-11	TUNER (JE)	
⚠114	1-575-651-11	CORD, POWER (EA3, EA4, MY, SP, HK, TW, SAF)	
⚠114	1-575-653-11	CORD, POWER (E2, E3, IA, MX, JE)	
⚠114	1-690-608-11	CORD, POWER (AUS)	
⚠114	1-690-609-21	CORD, POWER (CND)	
⚠114	1-751-326-31	CORD, POWER (TH)	
⚠114	1-775-787-71	CORD, POWER (AEP, UK, G, EE, CIS)	
⚠115	1-569-007-11	ADAPTOR, CONVERSION 2P (E3, IA, JE)	
⚠115	1-569-008-11	ADAPTOR, CONVERSION 2P (EA3, MY, SP, TW, SAF)	
⚠115	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK, HK)	
* 257	1-452-879-11	MAGNET (CDM38L-5BD29AL)	
257	1-452-925-21	MAGNET ASSY (CDM38LH-5BD29AL)	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
⚠301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
HP101	A-2056-681-A	DECK (A) ASSY, HEAD (230AWR1)	
HP101	A-2056-683-A	DECK (A) ASSY, HEAD (230PWR1)	
HRPE101	A-2056-682-A	DECK (B) ASSY, HEAD (230AWR1)	
HRPE101	A-2056-684-A	DECK (B) ASSY, HEAD (230PWR1)	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M401	1-698-792-11	FAN, DC (GRX7/GRX7J/RX77: CND)	
M701	A-4672-004-A	MOTOR ASSY (TURN)	
M801	A-4672-004-A	MOTOR ASSY SLIDE)	
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	
⚠T11	1-431-659-11	TRANSFORMER, POWER (CND)	
⚠T11	1-431-660-11	TRANSFORMER, POWER (AEP, UK, G, EE, CIS)	
⚠T11	1-431-661-11	TRANSFORMER, POWER (GRX7/GRX7J)	
**			
		************** HARDWARE LIST **************	
#1	7-685-872-09	SCREW +BVTT 3X8 (S)	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#5	7-685-871-01	SCREW +BVTT 3X6 (S)	
#7	7-685-851-04	SCREW +BVTT 2X4 (S)	
#8	7-621-775-10	SCREW +B 2.6X4	
#9	7-621-255-15	SCREW +P 2X3	
#10	7-685-850-04	SCREW +BVTT 2X3 (S)	
#11	7-628-254-15	SCREW +PS 2.6X6	
#12	7-628-254-50	SCREW +PS 2.6X16	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-922-773-11

Sony Corporation
Home A&V Products Company

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(Shibaura)

MHC-GRX3/R300/ R500/RX55

SERVICE MANUAL

REVISED

US Model
Canadian Model
MHC-RX55
AEP Model
UK Model
MHC-R500/RX55
E Model
MHC-GRX3/R300
Australian Model
MHC-GRX3

Discard MHC-GRX3/R300/R500/RX55 Service Manual (No.9-922-801-11) previously issued.
This Service Manual contains it.

- MHC-GRX3/R300/R500/R55 is composed of following models.
  As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR MHC-GRX3/R300/R500/RX55

	MHC-GRX3	MHC-R300	MHC-R500	MHC-RX55
COMPACT DISC DECK RECEIVER SYSTE	HCD-GRX3	HCD-R300	HCD-R500	HCD-RX55
SPEAKER SYSTEM	SS-J20A	SS-J20B	SS-J30B	SS-J15A(US,CND) SS-J30(AEP,UK)

- Abbreviation
  - CND : Canadian model
  - MY : Malaysian model
  - MX : Mexican model
  - AR : Argentine model
  - SP : Singapore model
  - TW : Taiwan model

SPECIFICATIONS

General

Power requirements
North American model: 120 V AC, 60 Hz
European model: 230 V AC, 50/60 Hz
Mexican model: 120 V AC, 50/60 Hz
Australian and South African models:
220-240 V AC, 50/60 Hz
Other models: 110-120 V or 220-240 VAC, 50/60 Hz (Adjustable with voltage selector)

Power consumption 100W

Supplied accessories

AM loop antenna (1)
Remote RM-SG7(R300/R500) (1)
Remote RM-SG7B(GRX3/RX55) (1)
FM wire antenna (1)

Design and specifications are subject to change without notice.

PARTS LIST

Ref.No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS ******************************	
	1-475-827-11	REMOTE COMMANDER(RM-SG7B)(GRX3/RX55)	
	1-475-828-11	REMOTE COMMANDER(RM-SG7)(R300/R500)	
	1-501-374-11	ANTENNA,LOOP	
	1-501-594-11	ANTENNA (FM)	
	3-862-439-11	MANUAL,INSTRUCTION(ENGLISH)(US,CND)	
	3-862-439-21	MANUAL,INSTRUCTION(FRENCH)(CND)	
	3-862-439-31	MANUAL,INSTRUCTION(FRENCH,SPANISH) (E,SP,MY,MX,AR,TW)	
	3-862-439-91	MANUAL,INSTRUCTION(CHINESE)(SP,MY,TW)	
	4-982-031-01	COVER,BATTERY	

MINI Hi-Fi COMPONENT SYSTEM

SONY®

MICROFILM

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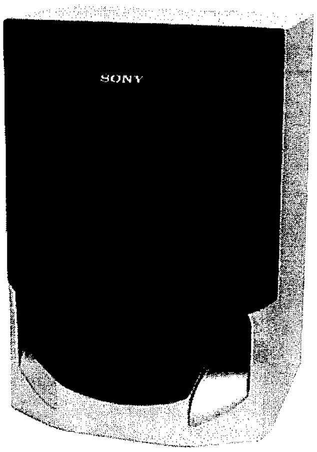
Sony Corporation
Home A&V Products Company

9-922-801-12

SS-J20/J20A/J20B/J30/J30B

SERVICE MANUAL



AEP Model
UK Model
SS-J20/J30/J30B
E Model
SS-J20A/J20B
Australian Model
SS-J20A

SONY -08730

- This set is the speaker system in MHC-GRX3/RX33/RX55/R300/R500

Photo : SS-J20

SPECIFICATIONS

SS-J20

Speaker system	2-way, bass-reflex type
Speaker units	
Woofer :	17 cm, cone type
Tweeter :	5 cm, cone type
Nominal impedance	6 Ω
Dimensions (w/h/d)	Approx. 220 × 320 × 221mm (8 3/4× 12 5/8 × 8 5/8 in.)
Mass	Approx. 3.2 kg (7 lb 1 oz.) net per speaker

SS-J30/J30B

Speaker system	2-way, bass-reflex type
Speaker units	
Woofer :	15 cm, cone type
Tweeter :	5 cm, cone type
Nominal impedance	6 Ω
Dimensions (w/h/d)	Approx. 220 × 320 × 270 mm (8 3/4× 12 5/8 × 10 3/4 in.)
Mass	Approx. 3.8 kg (8 lb 6 oz.) net per speaker

SS-J20A/J20B

Speaker system	2-way, bass-reflex type
Speaker units	
Woofer :	17 cm, cone type
Tweeter :	5 cm, cone type
Nominal impedance	6 Ω
Dimensions (w/h/d)	Approx. 220 × 320 × 243 mm (8 3/4× 12 5/8 × 9 5/8 in.)
Mass	Approx. 3.5 kg (7 lb 11oz.) net per speaker

Design and specifications are subject to change without notice.

SPEAKER SYSTEM

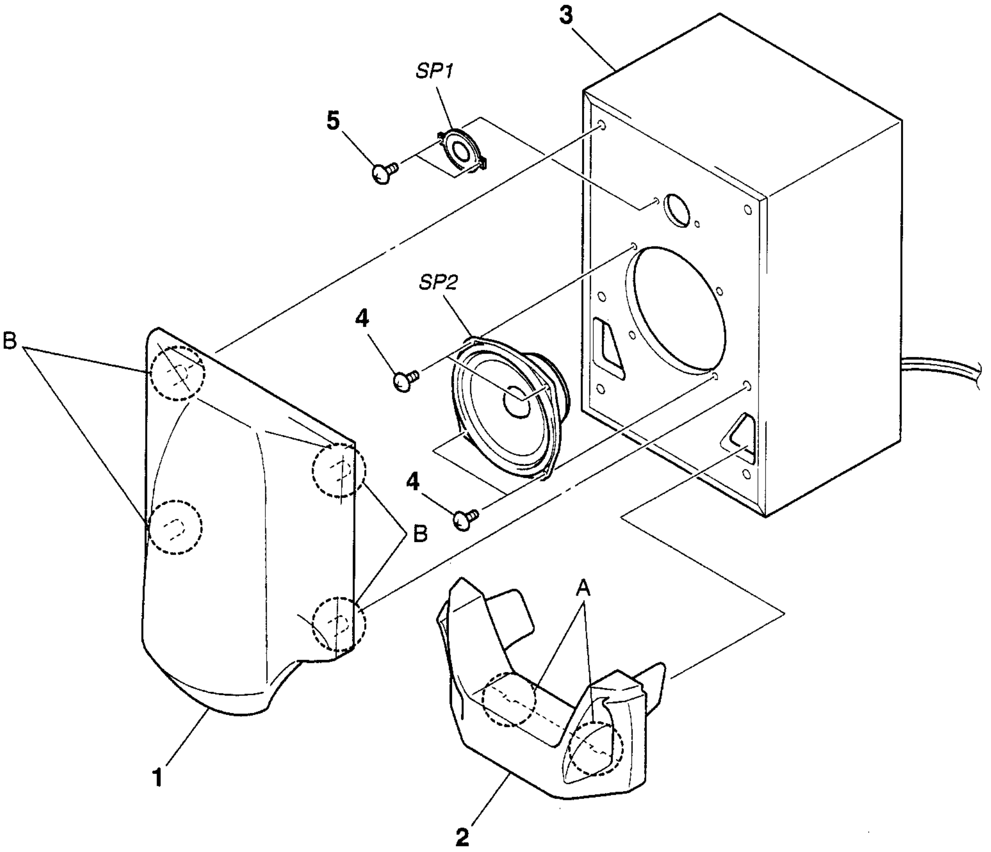
MICROFILM

SONY®

8730

EXPLODED VIEW AND PARTS LIST

Note : To remove the points A, insert a flat (-) head screwdriver tip and remove it.
The points B is attached by adhesive agent.



Ref. No.	Part No.	Description	Remarks
1	X-4950-146-1	GRILLE ASSY, FRONT (J20)	
1	X-4950-147-1	GRILLE ASSY, FRONT (J20A/J30)	
1	X-4950-148-1	GRILLE ASSY, FRONT (J20B/J30B)	
2	4-210-607-01	DUCT (J20)	
2	4-210-608-01	DJCT (J20A/J30)	
2	4-210-609-01	DJCT (J20B/J30B)	
* 3	4-210-603-01	BOX (J20/J20A)	
* 3	4-210-604-01	BOX (J30)	
* 3	4-210-605-01	BOX (J30B)	
* 3	4-210-606-01	BOX (J20B)	
4	7-685-146-19	SCREW	
5	7-685-146-19	SCREW	
SP1	1-505-971-11	SPEAKER (5cm) (J20)	
SP2	1-505-972-11	SPEAKER (17cm) (J20)	
SP1	1-505-973-11	SPEAKER (5cm) (J30/J30B)	
SP2	1-505-974-11	SPEAKER (15cm) (J30/J30B)	
SP1	1-505-976-11	SPEAKER (5cm) (J20A/J20B)	
SP2	1-505-977-11	SPEAKER (17cm) (J20A/J20B)	

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